



Missouri Adaptive Enterprise Architecture

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State of Missouri

Part III Appendices

Prepared By

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PART III – Appendices

APPENDIX A - Glossary of Acronyms

The following is a list of acronyms or abbreviations used throughout the MAEA Program and their corresponding meanings.

AEC	Architecture Executive Committee
ANSI	American National Standards Institute
ARC	Architecture Review Committee
ATC	Architecture Technical Committee
CIO	Chief Information Officer
CORA	Concise Object Relational Architecture
COM	Component Object Model
COMAP	Commission on Management and Productivity
COTS	Commercial-Off-The-Shelf
CPU	Central Processing Unit
DCOM	Distributed Component Object Model
DHCP	Dynamic Host Configuration Protocol
DNS	Domain Name Service
DOT	Distributed Object Technologies
DW	Data Warehouse
EDI	Electronic Data Interchange
EJB	Enterprise Java Beans
FAQ	Frequently Asked Questions
FTP	File Transfer Protocol
GIS	Geographical Information System
IEEE	Institute (of) Electrical (and) Electronic Engineers
ISO	International Standards Organization
IT	Information Technology
ITAB	Information Technology Advisory Board
LAN	Local Area Network
MAEA	Missouri Adaptive Enterprise Architecture

MIPS	Millions (of) Instructions Per Second
MOM	Message Oriented Middleware
MoVAP	Missouri's Value Assessment Program
NASCIO	National Association (of) State Chief Information Officers
NSR	National Systems and Research
OIT	Office of Information Technology
OS	Operating System
PC	Personal Computer
RDBMS	Relational Database Management System
SAM II	Statewide Advantage for Missouri II (replaced SAM I – Statewide Accounting and Management system)
SDC	State Data Center
SDLC	Systems Development Life Cycle
SME	Subject Matter Expert
UI	User Interface
WAN	Wide Area Network
XML	Extensible Markup Language
Y2K	Year 2000

APPENDIX B - Glossary of Terms

Critical terminology has been captured and defined here to further enhance the understanding of the MAEA Program. Please note that the following definitions are for MAEA Program reference purposes only. They may or may not reflect the definitions currently used by individual State of Missouri agencies or IT groups.

Adaptive	Able to support a wide variety of applications, and evolve as technology and business models change.
Agency	A governmental unit - in the narrowest sense, a governmental unit of the executive branch.
Application	<p>A combination of programs and services designed to perform a specific function directly for the user or, in some cases, for another application program.</p> <p>Examples of applications include word processors, database programs, Web browsers, development tools, drawing, image editing programs, and communication programs.</p>
Application Delivery	<p>Defines how applications are designed and delivered; how they cooperate, promotes common presentation standards to facilitate rapid training and implementation of new applications and functions.</p> <p>Good application delivery enables a high level of system integration, reuse of components and rapid deployment of applications in response to changing business requirements.</p>
Architecture	<p>The art or science of designing structures. A set of designs and specifications that results in orderly arrangement of structural components.</p> <p>The definition of architecture that is used in this document is taken from the IBM Systems Journal: “The architecture of an IT system is the structure or structures of the system, which comprise software and hardware components, the externally visible properties of those components, and the relationships among them.”</p> <p>The MAEA provides a framework for the capture, categorization and classification of hardware/software product components and compliance components that forms the blueprint for deploying information technology across the State of Missouri's enterprise.</p>
Architecture Administration	<p>Refers to the recurring activities and functions necessary to sustain an on-going Enterprise Architecture program. MAEA administrative activities include governance; management of roles, responsibilities and oversight of the</p>

processes that ensure the architecture remains viable and supports the business of the State.

Architecture Blueprint

The Architecture Blueprint is the term used for the captured detail and specifications that have been categorized and classified. This information defines how the IT Portfolio is built and/or will be built.

As new technologies are brought into the enterprise and older technologies replaced, the Architecture Blueprint needs to be updated to reflect the change in the IT Portfolio structure.

Architecture Blueprints provide the means to asynchronously implement a technology into the enterprise. This vitality brings efficacies into the enterprise thus justifying the architecture effort in the long run.

Architecture Change Management Process

The Architecture Change Management Process addresses changes to the MAEA Program. It does not address changes to the Architecture Blueprint itself (this occurs during the Architecture Vitality Process). Instead, the Change Management Process defines how the MAEA Program will be kept vital as business strategies or IT strategies shift.

MAEA Program reviews should occur every one to two years at a minimum. The Architecture Change Management Process is controlled by the ARC. However the ITAB or AEC may initiate recommendations for enhancement.

Architecture Communication Process

This process provides a mechanism to communicate the objectives and details of the State of Missouri architecture plan with all users and stakeholders to make sure their activities are synchronized with the plan.

This communication process also extends to customers and vendors who expect to do business with the State - to make sure their products and services conform to the State's architecture blueprint.

Architecture Compliance Process

The Architecture Compliance Process is based on a strong commitment to manage information technology from a statewide perspective.

Compliance is part of the overall MAEA program and is a means to assess adherence to the Statewide architecture, identify and resolve variances from the Statewide architecture, and document business cases and approve variances in a continuous cycle of quality improvement.

Architecture Documentation Process	<p>The Architecture Documentation Process guides the production of the Architecture Blueprint. The documentation process is based on a series of templates that provide the structure for documenting the architecture products and compliances and their related classifications (emerging, current, twilight and sunset).</p> <p>The resulting series of documents provides the details of the Architecture Blueprint and serves as the guideline to aid agencies in determining technology solutions.</p>
Architecture Domain Committee	<p>Each architectural domain will have an Architecture Domain Committee that is responsible for developing statewide standards and maintaining the domain content.</p> <p>Domain committees are assembled with appointed subject matter experts and stakeholders from various agencies. These committees submit their findings, recommendations and deliverables to the Architecture Office.</p>
Architecture Executive Committee (AEC)	<p>An executive committee made up from government business leaders and the State CIO. This group acts as a steering committee to ensure the Enterprise Architecture is aligned with the State's business needs.</p> <p>The AEC has final approval of architectural standards, business cases and variances from these standards, and any changes to the Architecture Governance Processes.</p>
Architecture Governance Process	<p>The Architecture Governance Process is the exercise of economic, political, and administrative authority to manage the development and implementation of the MAEA initiative.</p> <p>The Architecture Governance process is composed of several primary sub-processes for formulation and publication of statewide policies, standards, guidelines and best practices for information technology.</p> <p>The governance process also includes the definition of the roles and relationships of the participating agencies, individuals and groups that oversee and control the development, maintenance and vitality of the Enterprise Architecture.</p>
Architecture Owner	<p>An executive manager with authority and responsibility for the State's technology direction. This position exists on two levels:</p> <p>The State of Missouri CIO acts as the Architecture Owner from an enterprise (statewide) perspective.</p> <p>Agency or Department CIO's or IT Directors act as the Architecture owner at the agency or department level.</p>

Architecture Review
Committee (ARC)

Both levels are responsible for championing the value, effectiveness, implementation and subsequent conformance of the Enterprise Architecture.

A Statewide committee composed of selected ITAB members appointed by the ITAB chairperson. It consists of a representative cross section of state business operations as well as department size.

The ARC oversees the architecture governance process at the Statewide level and initiates any relevant domain committees to support state business initiatives.

The ARC supports the AEC by reviewing the MAEA, recommending changes, monitoring compliance of IT projects and providing other technical guidance as needed.

Architecture
Review Process

Allows the various architecture governance committees to review, debate, discuss and decide any additions and changes to the Architecture Blueprint and MAEA Program. The review process also determines which variances will be accepted into the State's IT Portfolio.

Architecture
Technical Committee

This committee serves as the Enterprise Architecture educator and mentor to the Statewide architecture community.

Members of this committee are subject matter experts within various technical disciplines who participate in domain sessions and are available for advice and counsel to users of the architecture. They also function to assure that Technology Areas and components are properly placed and thoroughly addressed within the domains.

Architecture
Vitality Process

Vitality is the process that makes sure the Architecture Blueprint remains current and accurate. To ensure vitality, the Architecture Blueprint must be routinely reviewed from a business strategy, IT strategy and a study of technology directions.

Anytime business strategies, IT strategies, or technology solutions shift noticeably, an architecture vitality review should be exercised to ensure validity of product and compliance components and their related classifications.

Asynchronous
Processing

A method of communication that allows one program to send messages or data to another program without requiring an immediate response.

Just as voice mail permits communication without requiring both parties to be available at the same time, requests can be placed in a queue and the other application has the flexibility to process the requests when it is ready (e.g., once a day, once an hour, or as they occur).

Audit Trail	<p>An audit trail is the capturing of any series of events or actions taken upon assets within the MAEA.</p> <p>Within the MAEA document repository, audit trails track access to view content, to create content, to change content (including that to update, modify, or append documents) and to aid in determining when the asset last went through a vitality review.</p> <p>Audit trails require a record be kept of who accessed the information, the date of any changes and a summary of the additions or changes made to an asset.</p> <p>The State may from time to time review the audit trail information if there is reason to suspect improper use of the information or to monitor the MAEA assets for quality control or management purposes.</p>
Benchmark	<p>A statement or set of conditions against which a product, system or goal is measured. Benchmarks specify the criterion for success of the MAEA.</p>
Best Practice	<p>A technique or methodology that, through experience and research, has proven to reliably lead to a desired result. A commitment to using the best practices in any field is a commitment to using all the knowledge and technology at one's disposal to ensure success.</p>
Bobby Certification	<p>Bobby is a web-based tool that analyzes web pages for their accessibility to people with disabilities. Bobby is designed for developers to test web pages and generate summary reports highlighting the most critical issues effecting site accessibility before posting to the Web or to Intranets. Bobby Certification ensures support for the new US Section 508 Web Content Accessibility Guidelines.</p>
Business Case	<p>A business case is the body of facts and evidence presented to the AEC to support a recommended course of action. Generally, a business case is prepared when a major change in policy, direction, technology, or deviation from the MAEA published Architecture Blueprint is proposed.</p> <p>A business case consists of a thorough analysis of business needs, opportunities, threats, and options developed for senior management's consideration and decision.</p> <p>The business case will also need to identify the IT project's link to enterprise objectives or strategic goals, show evidence of compliance with the enterprise information technology architecture, and indicate buy-in from project advocates.</p>

Business Driver

Business Drivers are external and internal forces that create a need for business action or "drive" the organization's business, as well as the strategies that an organization defines in response to these forces.

Because business drivers are the direction-setting mechanism for organizations, it is not inaccurate to say that business drivers are business strategies. However, not all business strategies are business drivers for the purpose of defining the MAEA.

As an example, certain individual department or agency level strategies, that are short term or tactical in nature, may not be suitable business drivers at the enterprise-level.

In essence, business drivers are those "key enterprise-level business strategies" that will have the most significant impact on the architecture process.

Business Trend

A business trend is a shift or change in the fundamental business dynamics within an industry. Business trends tend to drive enterprise-wide strategic decisions and are the result in shifts in attitudes, values, technologies and the economic landscape.

Change Management

A systematic approach to dealing with change, both from the perspective of an enterprise and on the individual agency level. A somewhat ambiguous term, change management has at least three different aspects, including:

- Adapting To Change
- Controlling Change
- Effecting Change.

A proactive approach to dealing with change is at the core of all three aspects.

Architecture Office

The Architecture Office resides within the CIO's office. This position is responsible for the use, maintenance and communications of the architecture at the enterprise-level. The Architecture Office is an authority on the MAEA and Architecture Blueprint.

As a business technologist, the Architecture Office works on enterprise IT issues with broad technical or strategic implications. This person has significant interface with the internal and external stakeholders to increase their confidence in the Enterprise Architecture program.

Compliance Component

Compliance Components are those architectural components that cannot be classified as technology "products" per se as they are not procured in the traditional sense but are nonetheless important in shaping the

	<p>Architecture Blueprint. Currently, three types of compliances have been identified:</p> <ul style="list-style-type: none"> • Guidelines - general statements of direction or desired future state for the architecture blueprint. • Standards - indicate very specific protocols, configurations, or version statements. • Mandates - those compliances required by law as in legislative mandates
Component	<p>Individual parts of the whole. The discrete parts that must be combined to produce a working and useful result.</p> <p>In programming and engineering disciplines, a component is an identifiable part of a larger program or construction. Usually, a component provides a particular function or group of related functions. Examples of technology infrastructure components include hardware platforms, operating systems, database systems, networks, etc.</p> <p>For the MAEA, the term component is used to reference either a Product Component or a Compliance Component.</p>
Component-Based Development	<p>Component-based development is a software development approach where all aspects and phases of the development lifecycle, including requirements analysis, architecture, design, construction, testing, deployment, the supporting technical infrastructure, and project management, are based on components.</p>
Conditional Use Restriction	<p>Occasionally, a component has some characteristic that would limit its usefulness as an enterprise product. For example, some desktop database products may be well suited for a personal desktop application but should never be used for storing, accessing, or maintaining enterprise data. These products may be accepted into the architecture but with a Conditional Use Restriction documented.</p>
Configuration	<p>Generally, a configuration is the arrangement - or the process of making the arrangement - of the parts that make up a whole. Examples of configurations include:</p> <ul style="list-style-type: none"> • In computers and computer networks, a configuration often refers to the specific hardware and software details in terms of devices attached, capacity or capability, and exactly what the system is made up of. • In networks, a configuration means the network topology.

- In installing hardware and software, configuration is the methodical process of defining options that are provided.

Current Status	<p>As Domains, Disciplines, Technology Areas, Product Components and Compliance Components go through the architecture documentation process, it is important to understand where a given document is in the architecture process. As each level is being evaluated for final placement in the Architecture Blueprint it will be given an appropriate status.</p> <p>The statuses initially defined include:</p> <ul style="list-style-type: none"> • In Development - The architecture detail is being documented, defined or updated. • Under Review - The architecture detail is being reviewed by the governance groups • Accepted - Indicates that the ARC has accepted the architecture detail into the architecture • Rejected - Indicates the architecture detail was rejected by any of the governance groups during the review
Current Technologies	Technologies that are the current standard for use within the enterprise, tested and generally accepted as standard by industry. These items comply with or support the principles listed for the discipline.
Data Management	<p>Data management is the function of controlling the acquisition, analysis, storage, retrieval and distribution of data.</p> <p>Data management can involve protecting the physical security of data, ensuring back up and recovery procedures are in place, protecting confidential or private information in data, reducing redundancy in data, and establishing an enterprise data architecture.</p>
Data Mart	<p>A repository of data gathered from operational data and other sources that is designed to serve a particular community of knowledge workers. The data may be derived from an enterprise-wide database or data warehouse or be more specialized.</p> <p>The emphasis of a data mart is on meeting the specific demands of a particular group of knowledge users in terms of analysis, content, presentation, and ease-of-use.</p>

Data Warehouse	<p>A central repository for all or significant parts of the data that an enterprise's various business systems collect. W. H. Inmon coined the term.</p> <p>Typically, data from various online transaction processing (OLTP) applications and other sources is selectively extracted and organized on the data warehouse database for use by analytical applications and user queries.</p> <p>Data warehousing emphasizes the capture of data from diverse sources for useful analysis and access, but does not generally start from the point-of-view of the end user or knowledge worker who may need access to specialized, sometimes local databases. The latter idea is known as the data mart.</p>
De-Facto Standard	<p>Standards that have become accepted and adopted although not originally defined by consent. Often are more important than standards that have been defined by consent of standards groups.</p> <p>A good example is TCP/IP, which is accepted as a de-facto standard instead of the competing OSI (Open Systems Interconnect) standard, which was defined by a standards group.</p>
Discipline	<p>Logical functional areas to address when building the Enterprise Architecture.</p> <p>Each MAEA Domain will contain one or more Disciplines. The detail of the MAEA begins to form at the Discipline level.</p>
Disparate Systems	<p>A clear and fundamental difference between incongruous or incompatible systems. Implies interoperability of dissimilar computing platforms (e.g., MS-DOS, UNIX, OS/2, and Macintosh), databases (e.g., IDMS, Oracle, etc.) or other technologies.</p>
Domain	<p>A sphere of action or thought. A set of related technologies. A set of components that have a common relationship. The MAEA Domains are logical groupings of disciplines that form the main building blocks within the architectural framework.</p>
e-Government	<p>E-Government refers to the government's use of information technologies (such as Wide Area Networks, the Internet, and mobile computing) to exchange information and services with citizens, businesses, and other arms of government.</p>

Emerging Technology	Emerging technologies consist of new technological discoveries that possess the potential to significantly affect the Missouri Enterprise Architecture; existing technologies that have impending new or revised applications; and major issues and trends that may have profound, new technology implications.
Enterprise	Enterprise represents an organization in total, including all subordinate entities, encompassing corporations, small businesses, non-profit institutions, government bodies, as well as other kinds of organizations.
Enterprise Architecture	<p>The framework that defines the overall structure of the business and the information and infrastructure that supports the business, based on defined business needs and principles that guide implementation choices.</p> <p>Enterprise Architecture includes the overall plan for designing, implementing and maintaining the infrastructure to support the enterprises business functions and underlying networks and systems.</p>
Entity	An information-sharing unit. All agencies (see definition above) are entities; so are courts and legislative bodies. Private organizations that share governmental information are also entities, as are private persons.
Event Driven	The technique of creating applications in which the order of actions is determined by the end user or an external event as opposed to a procedure-oriented program.
Extensible	<p>In information technology, extensible describes something, such as a program, programming language, or protocol, which is designed so users (or later designers) can extend its capabilities.</p> <p>Extensibility can be a primary reason for the system, as in the case of the Extensible Markup Language (XML), or it may be only a minor feature.</p> <p>Approaches to extensibility include facilities (sometimes called hooks) for allowing users to insert their own program routines, the ability to define new data types, and the ability to define new formatting markup tags.</p>
Framework	A set of assets, when brought together, forms the framing pieces to guide governments as they create architectures for their organizations.

Governance	<p>The act or process of governing. Governance is a neutral concept comprising the complex mechanisms, processes, relationships and institutions through which citizens and groups articulate their interests, exercise their rights and obligations and mediate their differences.</p>
Guideline	<p>A systematically developed statement on how to implement a particular standard or convention. A good guideline is based on the best research available, rather than on opinion.</p> <p>Guidelines are more flexible than standards. They can be developed quickly and can be changed easily as new information regarding Enterprise Architecture advances becomes available.</p> <p>Guidelines make it easier for IT Managers to adopt the MAEA program to suit their agencies, rather than inflexible, one-size-fits-all solutions to issues that may be unique to other entities within the enterprise.</p>
Impact Analysis	<p>Impact Analysis is the process of mapping out the situation as it is before any of the proposed changes take place and then determining the impact on the environment of the proposed change.</p>
Information Technology (IT)	<p>IT (information technology) is a term that encompasses all forms of technology used to create, store, exchange, and use information in its various forms (business data, voice conversations, still images, motion pictures, multimedia, and other forms, including those not yet conceived).</p> <p>It's a convenient term for including both telephony and computer technology in the same word. It is the technology that is driving what has often been called "the information revolution."</p>
Information Technology Advisory Board (ITAB)	<p>Established in 1995, the Information Technology Advisory Board (ITAB) is composed of Information Technology (IT) managers from each of Missouri's state agencies to set technical standards, select and sponsor new technology research and development activities, and to conduct operational and tactical planning.</p>
Infrastructure	<p>The basic framework of an organization or operation. Infrastructure components are units of technology (hardware, software, networks, platforms, etc.) that support the flow and processing of information, determine how it functions and how flexible it is to meet future requirements.</p>
Integration	<p>The process of bringing together related parts into a single system - to make various components function as a connected system.</p>

Interface

As a noun, an interface is either:

- A user interface, consisting of the set of dials, knobs, operating system commands, graphical display formats, and other devices provided by a computer or a program to allow the user to communicate and use the computer or program.
- A programming interface, consisting of the set of statements, functions, options, and other ways of expressing program instructions and data provided by a program or language for a programmer to use.
- The physical and logical arrangement supporting the attachment of any device to a connector or to another device.

As a verb, to interface means to communicate with another person or object. With hardware equipment, to interface means making an appropriate physical connection so that two pieces of equipment can communicate or work together effectively.

Internet

The Internet, sometimes called simply "the Net," is a worldwide system of computer networks - a network of networks in which users at any one computer can, if they have permission, get information from any other computer (and sometimes talk directly to users at other computers).

It was conceived by the Advanced Research Projects Agency (ARPA) of the U.S. government in 1969 and was first known as the ARPANET. The original aim was to create a network that would allow users of a research computer at one university to be able to "talk to" research computers at other universities.

A side benefit of ARPANet's design was that, because messages could be routed or rerouted in more than one direction, the network could continue to function even if parts of it were destroyed in the event of a military attack or other disaster.

Today, the Internet is a public, cooperative, and self-sustaining facility accessible to hundreds of millions of people worldwide. Physically, the Internet uses a portion of the total resources of the currently existing public telecommunication networks.

Interoperability

The capability to allow users to readily share data among applications residing on varying combinations of hardware and software within and between existing networks. It is the ability of a system or a product to work with other systems or products without special effort on the part of the customer.

IT Architecture Manager	<p>The IT Architecture Manager is responsible for the use and communication of the Enterprise Architecture (principles, processes, components) on behalf of the Architecture Owner at the department level. Each agency or department will assign an Architecture Manager.</p> <p>The structure and composition of this position will vary by department but this person will establish and manage departmental compliance to ensure conformance of IT deployment projects to the Architecture Blueprint and communicate departmental initiatives with the Architecture Office.</p>
IT Portfolio	<p>The physical installation of technologies within the State of Missouri. This comprehensive suite, or collection of technologies includes all EA Repository items (documents, diagrams, specifications, models, Product and Compliance Components) from all Domains as well as any custom technology installed in the State of Missouri that may not be documented in the Architecture Blueprint.</p>
Kiosk	<p>A kiosk is a small physical structure (often including a computer and a display screen) that displays information for people walking by. More sophisticated kiosks let users interact and include touch screens, sound, and motion video.</p>
Knowledge Management	<p>Knowledge management is the name of a concept in which an enterprise consciously and comprehensively gathers, organizes, shares, and analyzes its knowledge in terms of resources, documents, and people skills.</p> <p>Knowledge management involves data mining and some method of operation to push knowledge resources to users.</p>
Legacy Systems	<p>An automated system built with older technology that may be unstructured, lacking in modularity, documentation and even source code.</p>
MAEA Program	<p>The Missouri Adaptive Enterprise Architecture (MAEA) Manual presents the guidance and approach for development and administration of the Missouri Adaptive Enterprise Architecture as well as information that defines the individual domain architectures.</p> <p>The manual is composed of three parts:</p> <ul style="list-style-type: none"> • Part I - Architecture Administration • Part II - Architectural Processes and Templates • Part III – Appendices

Messaging	<p>In the broadest terms, messaging (also called electronic messaging) is the creation, storage, exchange, and management of text, images, voice, telex, fax, e-mail, paging, and Electronic Data Interchange (EDI) over a communications network.</p> <p>In programming, messaging is the exchange of message (specially-formatted data describing events, requests, and replies) to a messaging server, which acts as a message exchange program for client programs.</p>
Meta Group	META Group is a research and consulting firm, focusing on information technology and business transformation strategies.
Metadata	<p>In general, metadata is "data about data" that is, data describing the structure, data elements, interrelationships and other characteristics of electronic information.</p> <p>Metadata describes how and when and by whom a particular set of data was collected, and how the data is formatted. Metadata is essential for understanding information stored in data warehouses.</p>
Methodology	A detailed and structured approach, containing generic and tool related step-by-step guidelines, to developing, upgrading, improving or replacing application systems. Also called a "blueprint".
Middleware	<p>Middleware is systems integration software for distributed processing and for database and user interfaces. Middleware facilitates the interaction of disparate components through a set of commonly defined protocols.</p> <p>The purpose of middleware is to limit the number of interfaces required for interoperability by allowing all components to interact with the Middleware using a common interface.</p>
Migration	<p>In information technology, migration is the process of moving from the use of one operating environment to another operating environment that is, in most cases, is thought to be a better one. Migration can involve moving to new hardware, new software, or both.</p> <p>Migration within the MAEA also includes the migration of technologies across classifications (emerging, current, twilight and sunset).</p>

Migration Strategy	<p>The process used to define a consistent and efficient solution for managing the impacts of moving the classification of a Product Component included in the Architecture Blueprint. A Migration Strategy must be defined when:</p> <ul style="list-style-type: none"> Existing Product Components, classified as “Emerging” are moving to the classification of “Current” Existing Product Components, classified as “Current” are moving to either “Twilight” or “Sunset”
Missouri’s Value Assessment Program	<p>An effort underway in Missouri designed to assess the value business projects bring to citizens. While some business projects will truly generate fiscal return on investment, other will only generate goodwill, i.e., better service and improved citizen satisfaction. Missouri’s Value Assessment Program (MoVAP) is designed to uncover these issues and contribute to fully informed decisions.</p>
Moore's Law	<p>Moore's Law is that the pace of microchip technology change is such that the amount of data storage that a microchip can hold doubles every year or at least every 18 months.</p> <p>In 1965 when preparing a talk, Gordon Moore noticed that up to that time microchip capacity seemed to double each year. The pace of change having slowed down a bit over the past few years, the definition has changed (with Gordon Moore's approval) to reflect that the doubling occurs only every 18 months.</p>
Narrative	<p>A summary definition statement that defines the concept, rationale, benefits and essential communications associated with the details of a deliverable.</p>
Network	<p>In information technology, a network is a series of points or nodes interconnected by communication paths. Networks can interconnect with other networks and contain subnetworks.</p>
NSR	<p>National Systems & Research Co. is the contracted company, working with the Office of Information Technology as a technical partner to support the development of a model adaptive, enterprise-wide architecture template for Missouri state government to use in establishing their own Enterprise Architecture.</p>
N-Tier	<p>Applications built using a layered model approach. The internals of each tier are unique to the implementation but the interactions between the tiers are defined. N-tier does</p>

not relate to the number of systems involved. It relates to the defined interfaces that allow different tiers to be changed and/or replaced without affecting the other tiers.

Object-Oriented

An application development and database technology based on defining abstractions of real-world entities known as objects, such as invoices, orders and customers, which contain both data and procedures.

Pervasive (Computing)	<p>The idea that technology is moving beyond the personal computer to everyday devices with embedded technology and connectivity as computing devices become progressively smaller and more powerful.</p> <p>Also called ubiquitous computing, pervasive computing is the trend towards increasingly connected computing devices in the environment. Trends being brought about by a convergence of advanced electronic - and particularly, wireless - technologies and the Internet.</p>
Policies	<p>A policy is a formal set of statements that define operating rules within the enterprise. Policies are established as a means of maintaining order, security, consistency, or other ways of successfully furthering a goal or mission.</p> <p>Position Statement Interpretive statements that attempt to define or explain the stance on a product or compliance component that affects the Enterprise Architecture. It is derived from pertinent facts and data, and is germane to the MAEA mission, vision, philosophy, values, and strategic initiatives.</p>
Primer	<p>Document or instructional aid that covers the basic elements of a particular subject. Two primers are available for MAEA, an Executive Primer and an Agency Primer.</p> <ul style="list-style-type: none"> • Executive Primer - Provides an Executive-level overview of Missouri's Adaptive Enterprise Architecture (MAEA) program. Its intent is to describe the benefits and impacts of the MAEA to State executive staff, elected officials and agency directors. • Agency Primer - Provides an overview of Missouri's Adaptive Enterprise Architecture (MAEA) program from a State agency perspective. Its intent is to describe the MAEA in general terms for those agency professionals not typically exposed to IT architecture on a regular basis. The Agency Primer's audience will be State agency IT managers and members of IT project teams and maintenance groups.
Principle	<p>A statement of preferred direction or practice. Principles constitute the rules, constraints and behaviors that an enterprise will abide by in its daily activities over a long period of time.</p>

Privacy	<p>The securing of information that should not be made public.</p> <p>On the Internet, privacy is a major concern of users. Most Web users want to understand that personal information they share will not be shared with anyone else without their permission.</p> <p>Although this form of privacy is not usually needed or wanted, there are occasions when a user may want anonymity (for example, to report a crime).</p>
Procedure	<p>A chronological event, usually containing steps to follow or a series of actions performed repeatedly in sequence in order to achieve a desired outcome.</p>
Process Model	<p>A process model is a "road map" that shows the activities, functions, and processes of an organization or course of action. Processes in a process model are often defined in terms of their inputs and outputs.</p> <p>The process model also describes how to manage the associated development and managerial tasks associated with activity being modeled.</p>
Procurement	<p>Procurement is all of the processes involved in requesting, ordering, auditing, and paying for goods and services.</p>
Product Component	<p>Product Components are those components of the architecture that can be traditionally procured from a vendor such as hardware, software, or other tangible technology assets.</p> <p>When documenting Product Components within the Architecture Blueprint, information is captured regarding the products vendor, desirable vs. undesirable characteristics of the product, and the products classification.</p> <p>Product Component classifications include Emerging, Current, Twilight and Sunset.</p>
Project Management	<p>The formalized process of managing a large project. Project management is the planning, scheduling, and controlling of project activities to effectively and efficiently reach a major goal, such as developing a program or building a facility.</p> <p>Today, project management is a combination of tools, techniques and managerial control methods to undertake a unique scope of work, of a given specification, within the constraints of cost and time.</p>

Proliferation	Proliferation is generally understood to be a process in which a new type of technology is introduced into an area where it was previously not yet available and the rapid spread of such technology across the enterprise.
Protocol	Rules governing transmitting and receiving of data.
Scalability	The ability to use the same applications and systems on all classes of computers from personal computers to supercomputers and for those applications to continue to function well as it (or its context) is changed.
Security	<p>Security encompasses all of the safeguards in an information system, including hardware, software, personnel policies, information practice policies, disaster preparedness, and the oversight of all these areas.</p> <p>The purpose of security is to protect both the system and the information it contains from unauthorized external access and from internal misuse. Security must be balanced against the need for access and the rights of citizens to privacy.</p>
Service Level Requirements	Specifications, usually in measurable terms, of those services the provider will be required to furnish.
Stakeholder	All of those individuals and groups which serve or are served by the enterprise - i.e., those who have a “stake” in the effective operation of the enterprise.
Standard	<p>Standards are a set of criteria (some of which may be mandatory), voluntary guidelines and best practices. The word standard can also be used to mean commonly accepted.</p> <p>Within the MAEA templates, the term - "standard" is used to define the level of a compliance component that indicates very specific protocols, configurations, or version statements.</p>

Technology Area	<p>Technology Areas are topics within a Discipline that help to define the boundary of the Discipline and its parent Domain. Technology Areas are an additional layer of detail that provides the Domain committees with general descriptions of technology topics relevant to each Discipline.</p> <p>As an example, in the MAEA Infrastructure Domain, the Platform Discipline can be further defined to include the following Technology Areas:</p> <ul style="list-style-type: none"> • Hardware • Operating Systems • Utilities • Provisioning
Subject Matter Expert (SME)	<p>One who is knowledgeable in the functional or technical aspects of an application system or other area of study, such as development; also called a SME.</p>
Sunset Date	<p>The documented date for the discontinuation of a Product Component.</p>
Sunset Technology	<p>Technologies that do not conform to Missouri's Enterprise Architecture Principles, Best Practices and Technology Trends and a discontinuation date has been set for the technology to be phased out of the enterprise.</p> <p>Sunset technologies cannot be used beyond the sunset date documented within the architecture.</p>
System	<p>A set of elements so connected or related as to perform a unique function not performable by the elements alone (Rechtin 1991).</p> <p>A system takes into account the interdependence of people and events, actions and conditions and institutions and organizations.</p> <p>A systems approach takes into consideration various "production lines" of related tasks and procedures (operating system, decision-making system, financial system, administrative system) to perform certain functions.</p>
Systems Management	<p>Systems management is the management of the information technology systems in an enterprise. This includes purchasing of equipment and software, distributing it to where it is to be used, configuring it, maintaining it with enhancement and service updates, setting up problem-handling processes, and determining whether objectives are being met.</p>

Technology	Tools or tool systems by which we transform parts of our environment and extend our human capabilities (Tornatzky and Fleischer 1990).
Technology Area	Technology Areas are those technical items or topics that support the functionality of the architecture. Technology Areas are associated to a given Discipline (a Discipline is composed of multiple technology areas). Product and Compliance Components are associated with a Technology Area.
Technology Scan	Scan of the enterprise to determine the use of existing or proposed Product and Compliance Components throughout the State.
Technology Trend	Widely recognized forces or patterns of change that can be used to infer or predict the future of technology
Technology Watch	When a product or compliance has been determined to no longer fit into the current classification of the Architecture Blueprint, but no replacement product has been identified, the product or compliance must remain in a classification of “Current” with a technology watch placed on it. When a product or compliance has a technology watch, it goes through vitality more frequently until a replacement product is found. The Technology Watch can be removed from the product, once a replacement is found.
Template	A form, used as a guide, such as a document in which the standard parts are already filled in and the variable parts can be filled in as appropriate.
Trigger	An interpretation of an event that activates an operation in event modeling.
Twilight Technology	Technologies that do not conform to Missouri's Enterprise Architecture Principles, Best Practices, Technology Trends or Global Fit Criteria and are recommended to be phased out of the enterprise.

User Interface (UI)	<p>In information technology, the user interface (UI) is everything designed into an information device with which a human being may interact - including display screen, keyboard, mouse, light pen, the appearance of a desktop, illuminated characters, help messages, and how an application program or a Web site invites interaction and responds to it.</p> <p>The user interface can arguably include the total "user experience," which may include the aesthetic appearance of the device, response time, and the content that is presented to the user within the context of the user interface.</p>
Variance	<p>Documentation will be included if this product was accepted into the Architecture Blueprint based on a variance being granted.</p>
Vendor	<p>A vendor is any person or company that sells goods or services to someone else in the economic supply chain. In information technology as well as in other industries, the term is commonly applied to suppliers of technology goods and services to other companies, government and individuals.</p>
Version Control	<p>Version Control is the process of controlling, maintaining, and documenting maintenance and updates to programs, data, and other electronic assets. Version control systems help define the constraints on how a resource can be updated and keeps historically accurate and retrievable logs of a file's revisions.</p>
Virtual LAN	<p>A virtual (or logical) LAN is a local area network that maps workstations on some other basis than geographic location (for example, by department, type of user, or primary application).</p>
Vision Statement	<p>A vision statement is a brief statement of what the enterprise would like to be.</p> <p>A vision statement describes what the organization is working towards and what will happen as a result of the efforts put forth towards pursuit of the vision.</p> <p>A vision is not bound by time, represents global and continuing purposes, and serves as a foundation for a system of strategic planning.</p>
Workflow	<p>A term used to describe the tasks, procedural steps, organizations or people involved, required input and output information, and tools needed for each step in a business process.</p>

Missouri's approach to educating Domain Committees on the MAEA Manual and Architecture Blueprint is...progressively educational.



APPENDIX C - Architecture Education Approach

Missouri's approach to educating the Domain Committees on the Missouri Adaptive Enterprise Architecture and Architecture Blueprint is organized around two instructor-led sessions and on-going working sessions in a progressively educational format. The ultimate goal is to develop an appropriate level of detail for each domain.

The initial instructor-led session is an architecture primer that provides an overview of Enterprise Architecture and identifies the approach that the State of Missouri is taking for development and maintenance of an Enterprise Architecture for the State. This session will not address specific domain issues, but is intended to provide an understanding of the concepts of Enterprise Architecture.

The second set of sessions will be instructor-facilitated sessions that are domain specific. Each session will define the specific domain and provides the essential understanding of how to complete the documentation of standards and standard products, etc. associated with the domain. These sessions will also include overviews of the architectural processes that have an effect on the domains and the use of the fit matrices used to evaluate the Product and Compliance Components.

The third set of sessions does not consist of actual classes, rather they are the actual Domain Committee meetings in which the committee will derive and document the specific details of the Architecture Blueprint. The initial meetings will be facilitated by the ATC as necessary to assist the Domain Committees as they begin the domain documentation process. The domain committees will continue to meet as needed to maintain the vitality of the architecture blueprint.

The three session types are defined in greater detail in the following sections.



Session I – Introduction to Missouri Adaptive Enterprise Architecture

Overview

Purpose

The purpose of the Introduction to Missouri Adaptive Enterprise Architecture sessions is to provide a high-level overview of the Missouri State Architecture.

Presenters

This session is presented by State of Missouri qualified architects, generally members of the Architecture Technical Committee (ATC) or may be facilitated by contracted vendors.

Intended Audience

The primary audience for these training sessions are the Domain Committee members, however, others would benefit from a basic understanding of the architecture concepts such as:

- Architecture users
- Architecture Managers
- IT Developers
- IT Designers
- Various IT Stakeholders
- Business Leaders

Session Structure

This session is intended to be a half-day session, lasting approximately 4 hours. It will be a presentation format and the course outline essentially follows Part I of the Missouri Adaptive Enterprise Architecture Manual on a chapter-by-chapter basis presenting a conceptual view.

Committee members from multiple domains could attend this session because the training is not domain specific.

Prerequisites

- Review Missouri Adaptive Enterprise Architecture Manual
- Review State of Missouri Strategic e-Government Architecture
- Review State of Missouri e-Government Report and Plan

Syllabus

This introductory session is the first course in the series of MAEA educational events that are intended to educate and enlighten the Domain committees about Enterprise Architecture. MAEA Part I will be covered in detail. A quick overview of MAEA Part II and a high-level review of the Architecture Blueprint information, covering the domains and discipline definitions and boundaries, will then close out the day. These overviews at the close of the session will set the stage for the continued education that will be received in the Domain Definition Session to follow.

1. Session Introduction
 - 1.1. Overall educational goals
 - 1.2. Session Objectives
 - 1.3. Session Structure
2. Review MAEA Program Part I - Chapter 1: Introduction to Missouri Adaptive Enterprise Architecture
 - 2.1. History and Background of MAEA
 - 2.2. Definition of Architecture
 - 2.3. Scope of the MAEA
 - 2.4. Missouri Approach to Enterprise Architecture
 - 2.5. Enterprise Architecture Deliverables
 - 2.6. Focus of the MAEA
3. Review MAEA Program Part I - Chapter 2: MAEA Organization and Administration
 - 3.1. Introduce Architecture Governance Organization
 - 3.1.1. Present the Governance Organization chart
 - 3.1.2. Describe organizational roles and management responsibilities
 - 3.2. High-level overview of the Governance Processes
 - 3.2.1. Present the Architecture Governance Processes Chart
 - 3.2.2. Introduce Six Primary Architecture Governance Processes
 - Architecture Documentation Process
 - Architecture Review Process
 - Architecture Compliance Process
 - Architecture Vitality Process
 - Architecture Communication Process
 - Change Management Process
 - 3.2.2. Introduce Associated IT Management Processes
 - Project Management Process
 - Missouri's Value Assessment Program (MoVAP) Process
 - Procurement Process
4. Review MAEA Program Part I - Chapter 3: Business Drivers
 - 4.1. Discuss the purpose and origin of the enterprise business drivers
 - 4.2. Introduce the State of Missouri Enterprise Business Drivers
5. Review MAEA Program Part I - Chapters 4, 5 & 6: Principles, Best Practices and Technology Trends

- 5.1. Discuss the Missouri Enterprise Guiding Principles
- 5.2. Discuss Best Practices and site examples
- 5.3. Discuss Technology Trends and site examples
6. Review MAEA Program Part I – Chapter 7: Conclusion to Part I
 - 6.1. Introduce concept of Enterprise Architecture Pillars
 - 6.1.1 Discuss the importance of the pillars to the overall architecture
 - 6.1.2 Discuss the possible migration across the pillars
 - 6.1.3 Discuss Enterprise Architecture Pillar compliance requirements
 - 6.1.4 Emphasize the value of the MAEA
7. High-Level Introduction to MAEA Program Part II – Domains, Disciplines, & Architecture Blueprint
 - 7.1. Introduction to Domains and Disciplines
 - 7.2. Architecture Blueprint Structure Overview
 - 7.3. Introduce Templates and their relationships
8. Session Conclusion
 - 8.1. Summary
 - 8.2. Questions & Feedback

Presentation

For the PowerPoint presentation that will be used for guiding Session I, access the file named *MAEA Session I.ppt*.

Class Materials

For Instructor:

- Overhead projection unit
- Laptop or PC with Windows & PowerPoint loaded
- PowerPoint presentation - MAEA Session I.ppt
- Flip chart - for parking items for discussion
- Markers – to write on the flip chart.
- Tape – for posting flip chart items

For Attendees:

- Copy of the MAEA Program for each participant
- Paper for notes
- Pens

Session Timeline

<i>TOPIC</i>	<i>ESTIMATED TIME</i>
Session Introduction	5 minutes
MAEA Part I – Chapter 1	
- Introduction to Missouri Adaptive Enterprise Architecture	30 minutes
MAEA Part I - Chapter 2	
- MAEA Organization and Administration	45 minutes
MAEA Part I - Chapter 3	
- The Business Drivers	30 minutes
Break	15 minutes
MAEA Part I - Chapters 4, 5 & 6	
- Principles	
- Best Practices	45 minutes
- Technology Trends	
MAEA Part I – Chapter 7	
- Enterprise Architecture Pillars	
- Migration	30 Minutes
- Compliance	
- Value of the MAEA	
MAEA Part II	
- Domains, Disciplines	30 minutes
- Architecture Blueprint Framework	
Conclude the Session	15 minutes

Session 2 – Domain Definition Workshop

Overview

Purpose

The purpose of the Domain Definition Session is to study the definitions of the domains provided by the Architecture Committee in detail and become familiar with the process for evaluating and documenting the essential elements of the Domains.

Presenters

This session is facilitated by State of Missouri qualified architects, generally members of the Architecture Technical Committee (ATC) or may be facilitated by contracted vendors.

Intended Audience

The Domain Committee members assigned to this domain are the primary attendees of these sessions. The sessions will also be attended by members of the ATC and the Architecture Office who will assist with giving direction and consistency to the architecture process.

Session Structure

This session will cover two full days. A facilitated “how to” session that is tailored for each domain and is intended to be interactive. Participants will “walk through” the process of developing the domain architecture blueprint.

The objective of this set of sessions is intended to convey a high degree of understanding about the definition and content of each domain. It is not the intent to flush out all of the detail of each domain. The intent is to show the Domain Committee members how they should work when they convene their work sessions.

Note: Participants are encouraged to take notes regarding the Domains and Discipline information provided by the ARC throughout the two-day session. A brief period near the end of the session will be reserved to identify potential areas for enhancement. This information will be provided to the Architecture Office, so that the Architecture Office may be prepared to address them when they are fully discussed in Session III – The Domain Committee Work Sessions. Participants should also use the time prior to Session III to gather supporting information for their suggestions.

Part II - Chapter 1: Architecture Documentation Process provides the templates and processes that will be covered in detail during this session. The **Architecture Blueprints** contain the initial domain detail provided by the Architecture Committee and will be the basis for domain discussions.

2-day session covers the details and process for evaluating and documenting the essential assets of the Domains.

A facilitated session is held for each domain.

Prerequisites

- Attendance in the Introduction Class
- Review Missouri Adaptive Enterprise Architecture Program
- Become familiar with MAEA Part I, with particular attention to Chapters 4-6
- Become familiar with Domain definitions found in the **MAEA Part III – APPENDIX E**

Syllabus

The facilitated Domain Definition session explores and further defines the details specific to each domain. A facilitated session is held for each domain. Each session is intended to convey a high degree of understanding about the definition and content of the domain.

The approach to convey this understanding is the review of Templates and Process, with the majority of the session devoted to an interactive “walk-through” of the Architecture Documentation Process, using a sample of a single Discipline, Technology Areas, Product Component and Compliance Component.

Each session is facilitated by State of Missouri qualified architects, generally members of the Architecture Technical Committee (ATC) or may be facilitated by contracted vendors. The Domain Committees are the primary attendees of these sessions. The sessions will also be attended by members of the ATC and the Architecture Office who will assist with giving direction and consistency to the architecture process.

1. Session Introduction
 - 1.1. Overall educational goals
 - 1.2. Session Objectives
 - 1.3. Session Structure
2. Enterprise Architecture Framework Review
 - 2.1. Review Framework Diagram
 - 2.2. Review Architecture Governance Organization
 - 2.3. Review Domain Committee Roles and Responsibilities
 - 2.4. Review Domain Structure breakdown
 - 2.5. Highlight Domain Specific Information (for Domain covered in Session)
 - 2.5.1. Review information provided to the Domain Committees by the ARC
 - 2.5.2. Discuss the focus of the Domain covered by the Session
3. Describe Architecture Processes
 - 3.1. Review Architecture Lifecycle Model
 - 3.2. Review Architecture Information Flow
 - 3.3. Discuss Associated Management Processes
 - 3.4. Review Architecture Lifecycle Processes
 - 3.4.1. Architecture Documentation Process
 - 3.4.2. Architecture Compliance Process
 - 3.4.3. Architecture Vitality Process
 - 3.4.4. Architecture Change Management Process

- 3.4.5. Architecture Review Process
 - 3.4.6. Architecture Communication Process
- 3.5. Review high-level Sub Process steps, required to document the Domain
 - 3.5.1. Domain Template
 - 3.5.2. Discipline Template
 - 3.5.3. Technology Area Template
 - 3.5.4. Product Component Template
 - 3.5.5. Compliance Component Template
- 4. Interactive “walk through” of Domain Documentation Process. (Using sample of one Discipline, one Technology Area, one Product Component, and one Compliance Component)
 - 4.1. Documentation Process Overview
 - 4.1.1. Process Triggers
 - 4.1.2. Items to be Documented
 - 4.1.3. Working Sessions
 - 4.2. Demonstrate steps to Document the Domain
 - 4.3. Demonstrate steps to Document the Disciplines
 - 4.4. Demonstrate steps to Document the Technology Areas
 - 4.5. Demonstrate steps to Document the Product Components
 - 4.6. Demonstrate steps to Document the Compliance Components
 - 4.7. Discuss details of the Evaluation of Components
 - 4.7.1. Introduce EA Component Evaluation Workbook
 - 4.7.2. Finalizing Component Evaluations
- 5. Provide understanding of Architecture Review Process
 - 5.1. Proposing Architecture Changes
 - 5.2. Determining Review Decisions
 - 5.3. Documenting Architecture Review Decisions
- 6. Provide understanding of Architecture Communication Process
 - 6.1. Communicating Architecture Information
 - 6.2. Types of Communication Documents
- 7. Provide understanding of Architecture Compliance Process
 - 7.1. Requesting Architecture Help
 - 7.2. Determining Technology Options
 - 7.3. Creating Architecture Variance Business Case
- 8. Provide understanding of Architecture Vitality Process
 - 8.1. Determining Architecture Blueprint Changes
- 9. Provide understanding of Change Management Process
 - 9.1. Determining MAEA Program Changes
- 10. Define Domain Committee EA Repository Procedures
 - 10.1. Creating Architecture Blueprint Details
 - 10.2. Using Templates
 - 10.3. Check-In/Check-Out

2-day session covers the details and process for evaluating and documenting the essential elements of the Domains.

"Custom Shows"
for each Domain.

11. Session Conclusion

- 11.1. Discuss Domain/Discipline specific ideas, questions and notes for Architecture Office
- 11.2. Prepare for Domain Committee Working Session
 - 11.2.1. Assignment: Technology Scan for technology associated with Domain
 - 11.2.2. Members should become familiar with Domain/Discipline information provided by ARC

The purpose of the “walk through” is to foster the Domain Committee’s in-depth understanding of the definition and content of their domain and how to capture and record the details of the domain through the use of the defined templates and the structured Documentation process.

Some time will be allotted near the end of the session to identify ideas/questions to be forwarded to the Architecture Office.

Presentation

For the PowerPoint presentation that will be used for guiding Session II, access the file named *MAEA Session II.ppt*.

This PowerPoint presentation is intended for use in each of the specific Domain Committees, therefore it includes “Custom Shows” for each Domain. These customized presentations can be viewed by performing the following:

1. Selecting **Slide Show...** from the PowerPoint menu
2. Selecting **Custom Shows...** from the Slide Show sub-menu
3. Selecting the desired show by Domain name
4. Clicking on the **Show** button.

Class Materials

For Instructor:

- Overhead projection unit
- Laptop or PC with Windows & PowerPoint loaded
- PowerPoint presentation - MAEA Session II.ppt
- Electronic copies of Templates for data entry
- Sample Discipline, Technology Area, Product Component and Compliance Component for development during each class
- Flip chart – for parking items for discussion
- Markers – to write on the flip chart
- Tape – for posting flip chart items

For Attendees:

- Copy of the MAEA Program for each participant (each should have their own)
- Copies of Templates
- Paper for notes
- Pens

Session Timeline

DAY 1	
TOPIC	ESTIMATED TIME
Session Introduction	5 minutes
Enterprise Architecture Framework Review <ul style="list-style-type: none">- Review of Architecture Governance- Review Domain Structure- Review Domain Specific information- Review of ARC provided information	45 minutes
Describe Architecture Processes and high-level steps required to document domain	45 minutes
Break	15 minutes
Complete Domain Blueprint <ul style="list-style-type: none">- Review of steps- Work session to fill out template information	45 minutes
Complete Discipline Blueprint <ul style="list-style-type: none">- Review of steps- Work session to fill out template information	60 minutes
Lunch (and take care of emails, etc.)	90 minutes
Complete Technology Area Blueprint <ul style="list-style-type: none">- Review of steps- Work session to fill out template information	60 minutes
Break	15 minutes
Complete Product Component Blueprint <ul style="list-style-type: none">- Review of steps- Work session to fill out sample template information	90 minutes
Conclude the Session for Day 1	10 minutes

Day 1 session covers the Architecture Documentation Process

Day 2 session
addresses
remaining
Architecture
Lifecycle
processes

DAY 2	
TOPIC	ESTIMATED TIME
Review of work from Day 1	
- Questions & Answers regarding Documentation Process	30 minutes
- Discussion of future Committee Work Sessions	
Complete Compliance Component Blueprint	
- Review of steps	45 minutes
- Work session to fill out sample template information	
Discuss the Evaluation of Components	
- Introduce EA Component Evaluation Workbook (fit matrices)	45 minutes
- Finalizing Component Evaluations and fill in fit matrices	
Break	15 minutes
Overview of remaining Architecture Processes	15 minutes
- Relationships	
Architecture Review Process	
- Process Steps	45 minutes
- Discussion	
Lunch (and take care of emails, etc.)	90 minutes
Architecture Compliance Process	
- Process Steps	45 minutes
- Discussion	
Architecture Communications Process	
- Process Steps	30 minutes
- Discussion	
Break	15 minutes
Architecture Vitality Process	
- Process Steps	30 minutes
- Discussion	
Define Domain Committee EA Repository Procedures	
- Creating Architecture Blueprint Details	30 minutes
- Templates	
- Check-In/Check-Out	
Discuss participant comments on Domain/Discipline information provided by ARC & collection of information for Architecture Office	20 minutes
Review of needs for future Work Sessions	20 minutes
Conclusion	5 minutes



Session III - Domain Committee Work Sessions

Overview

Purpose

These work sessions determine the appropriate standards and document the domain. These work sessions are intended to produce the documentation that initially populates the domain.

Presenters

The Domain Chairperson will facilitate the work sessions. Members of the Architecture Technical Committee will assist with the facilitation to lend consistency and historical perspective to the process.

Note: It is possible that contractual services could be used to assist with research on the domain contents.

Intended Audience

The Domain Committee members assigned to this domain are the primary attendees of these sessions. The sessions will also be attended by members of the ATC and the Architecture Office who will assist with giving direction and consistency to the architecture process.

Session Structure

The initial Domain Committee Work Session is intended to cover a full 2-days.

These sessions are domain-specific workshops, intended to produce the documentation for each session. All documentation derived from these committees is subject to approval by the ARC. On-going Domain Committee meetings will be required to complete and maintain the vitality of the Domain architecture.

Participants will develop the component documentation by completing the five templates that cover the various levels of the Domain, including:

- Domain
- Discipline
- Technology Area
- Product Component
- Compliance Component

The Domain Committee Work Sessions are intended to produce the documentation that initially populates the domain.

The templates for documentation of these components are found in MAEA Part II - Chapter 1: Architecture Documentation Process.

Template forms serve as checklists and are useful during the development process. Templates for each applicable process are found immediately following the process details.

Prerequisites:

- Attendance in the Introduction Class
- Participation in the Facilitated Workshop
- Review Missouri Adaptive Enterprise Architecture Program
- Become familiar with MAEA Part I, with particular attention to Chapters 4-6
- Become familiar with the MAEA Architecture Processes within MAEA Part II, with particular attention to the Architecture Documentation Process in Chapter 1
- Become familiar with Domain definitions found in **Architecture Blueprints**
- Have appropriate Technology scan results available for reference

Work Plan

Deliverables

- **Membership Roster** – A roster of current members should be established and kept up-to-date for historical purposes. It will often be useful to have the ability to identify the people who may have been influential in the development of a specific evaluation, classification, etc.
- **Roles & Responsibilities Document** – The roles and responsibilities of the Committee members should be established to ensure all areas are covered in the most effective manner. Examples include (but not limited to):
 - Facilitator
 - Scribe
 - Committee Chairman
 - Discipline spokesperson
- **Meeting schedule** – A regular meeting schedule should be established by each Domain Committee to ensure efficient documentation of the architecture. Meetings held twice a week for two hours each session are highly recommended.
- **Meeting agenda** – Each Committee should create a standard agenda to follow for each Domain Committee meeting
- **Meeting minutes** – Minutes of each meeting will assist with identifying work-in-progress as well as provide information for communicating with stakeholders and other interested individuals. These minutes will be distributed in a timely manner to all Domain Committee members and stakeholders.

- **Technology Scan results** – to be used for identifying existing technology. The results of the scan will provide the information used to identify new Technology Areas, as well as a list of products to evaluate and classify.
- **Workload checklist** – Keeping a checklist of items addressed will ensure the completion in a timely manner.
 - New items
 - In progress
 - Under Review
 - Approved
 - Rejected
 - Needs Variance
- **Architecture Periodic Review Packet** - The packet of materials that will be delivered to the Architecture Office for review by the ARC and acceptance into the architecture. Monthly delivery of packets for review has been suggested.
 - Cover form
 - Contents
- **Evaluation Documents** – Supporting spreadsheets and/or other documents that will assist the Domain Committee to determine fit information for the evaluation of Product and Compliance Components.
 - Common Business Fit
 - Global Technical Fit
 - Global Operational Fit
- **Architecture Blueprints** - The Blueprints are the result of following the Architecture Documentation Process and using the Templates to populate the Architecture. Completion of these Blueprints is the ultimate goal of the Domain Committee Working Sessions.

Execute Architecture Documentation Process

Follow the procedures and utilize the templates found in MAEA Part II – Chapter 1.

- Document the Domain
- Document each Discipline
- Document each Technology Area
- Identify, evaluate and document each Product Component
- Identify, evaluate and document each Compliance Component

Execute Architecture Review Process

Follow the procedures found in MAEA Part II – Chapter 2 to submit the updates to the architecture for approval.

Execute the Architecture Compliance Process

Follow procedures found in MAEA Part II – Chapter 4 to create the documentation necessary to request a variance from the accepted standards.

Execute the Architecture Vitality Process

Follow the procedures found in MAEA Part II – Chapter 5 to update the portions of the Architecture documentation.

Suggestion: A Web page would provide a vehicle for communication of Committee progress.

APPENDIX D – MAEA Training Evaluation



MAEA EDUCATION SESSION TRAINING EVALUATION

Thank you for attending, participating and taking time to evaluate this training. Please make one check ☒ in each evaluation area. Please explain any evaluations of Adequate or Fair. Your additional comments are encouraged. While your signature is optional, it will be appreciated.

Course Title: _____

Start Date: _____

Instructor: _____

	Excellent	Very Good	Good	Adequate	Fair
Course Objectives (Clearly Stated)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Course Organization	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Course Pace	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Course Length	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Manual/Course Materials Content	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Opportunity for Participation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Instructor's Knowledge of Subject Matter and Course Material	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Instructor's Responsiveness to Individual Student's Needs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Classroom Environment (Temperature, Lighting, Space)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Overall Course Evaluation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
What did you like most about the class?					
What did you like least?					
Other comments: <i>(Please address any Adequate or Fair evaluations)</i>					

Name (Optional): _____ Department: _____

THANK YOU!

APPENDIX E – Domains and Disciplines

DOMAINS	
Interface	Application
Information	Systems Management
Infrastructure	Security
Integration	Privacy

Interface Domain

The Interface domain defines the roles, technologies, standards, and policies necessary to interface with the service and information assets of the state. The disciplines under this domain deal with the consistent and user-friendly presentation, the access delivery channels, and providing equal access solutions to accommodate all users.

Disciplines

- **Branding** - Defines the roles, standards, and technologies utilized in creating the "look and feel" for government web sites and portals.
 - **Technology Areas**
 - Browsers
 - Portals
 - Web content management
 - Style Sheets
 - Web access analysis (site traffic logging, service request analysis, up-selling)
- **Access** - Defines the roles, standards, and decision-making criteria for the acquisition and deployment of the components that perform the systematic process of presenting, collecting, and delivering information in a way that provides internal, as well as external users easy access to information and processes (i.e. websites, search engines, telecommunication, electronic transactions {EDI, FTP, and XML}). Additionally, the Access discipline defines the components that provide capabilities for capturing site traffic information and analyzing service utilization data to provide additional service options.
 - **Technology Areas**
 - Telephony
 - Interactive Voice Response
 - Web Access Channels
 - Electronic Transactions (EDI, FTP, and XML)
 - Traditional application screens

- **Accessibility** – Defines the roles, policies, standards and technologies as they apply to tool sets used to facilitate the accessing of information and services by disabled citizens, assuring equal access to electronic technology and automated systems for all citizens.
 - **Technology Areas**
 - Public Access Mechanisms
 - Bobby Certification
 - Education of Accessibility Concerns/Issues



Information Domain

The Information domain defines the roles, technologies, standards, and policies necessary to manage, store, design, and provide the information asset for the State. The disciplines under this domain deal with the transactional nature, decision-making requirements, and geographic component inherent in all information.

Disciplines

- **Knowledge Management** - Defines the roles, standards, and decision-making criteria for the acquisition and deployment of the components that perform the systematic process of finding, selecting, organizing, and distilling information in a way that provides internal, as well as external users easy access to information (i.e. document management, data warehouse and data-marts). Additionally, the Knowledge Management domain defines the components that provide capabilities to store and map demographic insight of the users, what they want, why they want it, and when they want it. Transactional data information is extracted and matched with demographic information to give a 360° perspective of the customer. This data is summarized and historical information is captured.
 - **Technology Areas**
 - Metadata
 - Extract, Translate, and Load
 - Data Warehouse
 - Data Marts
 - Document Management
 - Data Mining
 - Demographics (storage & mapping)
 - Data Dictionaries
- **Data Management** - Defines the roles, standards, and technologies for data definition, design, management, and administration as a recognized enterprise-wide resource. The Data Management discipline provides a process-independent view of all enterprise-wide data stored and housed in a manner that enables Knowledge Management and Application Engineering while adhering to all Security and Privacy requirements.

- **Technology Areas**
 - Relational Database Management Systems
 - Object Oriented Database Management Systems
 - Database Servers
 - Distributed Database Systems
 - Data Design (Conceptual to Physical)
 - Data Administration
 - Normalization
 - Storage Area Networks
- **GIT** - Defines the standards and technologies for implementation of Geographic Information Technology.
 - **Technology Areas**
 - Geographical Extract, Translate, and Load
 - Query and Analysis
 - Education on GIS / Aiding in Public Safety
 - GIS Software



Infrastructure Domain

The Infrastructure Domain defines the roles, policies, standards, and technologies that manage the communications and computing hardware infrastructure for the State's computing environment. Disciplines in this domain deal with the connection of the various hardware pieces throughout the enterprise and throughout the world, as well as the various hardware and operating systems.

Disciplines

- **Network** - Defines the roles, standards, and technologies that provide the communications infrastructure for the State's distributed computing environment. It defines the structure, topologies, bandwidth management, carrier services, and protocols necessary to facilitate the interconnection of the State's information resources, including those facilitating e-Government initiatives. Included in this discipline is the definition of Intranet networks, Virtual Private Networks, and external connections to external networks including the Internet. This includes consideration for public access from private and Kiosk workstations, wireless drivers, and PCs.
 - **Technology Areas**
 - Protocols
 - Products (Hubs, Routers, Bridges, Modems)
 - Standards – DNS, DHCP
 - Addressing
 - LAN/WAN
 - ISO, IEEE, ANSI Standards

- **Platform** - Defines the roles, standards, and decision-making criteria for the acquisition and deployment of computing and data storage hardware and its operating software and systems. The Platform discipline provides for the inclusion of industry standard platforms in use by users and the citizenry, which will enable e-Government access.
 - **Technology Areas**
 - Hardware
 - Operating Systems
 - Utilities
- **Provisioning** (criteria for loading of application, monitoring of load and communication of delivery)



Integration Domain

The Integration Domain defines the roles, policies, standards, and technologies that integrate the various business functions and applications throughout the enterprise. Disciplines in this domain deal with the functional, system, and application integration required to pull together the vast array of services and information provided by the State.

Disciplines

- **Functional Integration** - Defines the roles, standards, and technologies responsible for the conceptual and logical models, both current and proposed, which show how each of the functional areas, various application systems, and business information requirements tie together. Two perspectives should be considered: a high-level business view of the major system components and a high-level information model.
 - **Technology Areas**
 - Business Functionality Flows
 - System Flow Models
 - Conceptual Domain/Entity Models
 - High-level Use Cases
 - High-level Dataflow diagrams
- **Middleware** - Defines the roles, standards, and decision-making criteria for components that create an integration environment between the user workstations and legacy and server environments to improve the overall usability of the distributed infrastructure. Middleware provides interfaces between applications and network communications mechanisms. Middleware functions to create uniform mechanisms for application integration independent of network and platform technologies.

- **Technology Areas**
 - Application Server Services
 - Web Server Services
 - Distributed Object Technologies (DOT)
 - DCOM/COM+
 - CORA
 - Enterprise Java Beans
 - Message Oriented Middleware (MOM)
 - Point-to-Point
 - Publish and Subscribe
 - Processware
 - Transaction based middleware
 - Workflow

Application Domain

The Application Domain defines the roles, policies, standards, and application development methodologies required to support the various custom and purchased applications throughout the State. Disciplines for this domain cover the automation of the workforce, promote group productivity, and provide a set of reusable application components.

Disciplines

- **Application Engineering** - Defines roles, development methodologies, technology standards, and technologies that define how applications are designed and how they cooperate. It defines how those applications are documented and maintained. The Application Engineering discipline provides criteria, approved methodologies, and technologies that optimize the use and reuse of application components. The domain includes strategies for the retention of legacy knowledge and the phase out or upgrade of legacy systems.
- **Technology Areas**
 - Business Rules
 - Development Tools
 - Coding Standards
 - Component Object Repositories
 - Custom Systems
 - Enterprise-wide applications (ex: Electronic Payment Applications, Electronic Benefits Applications, etc.)
 - N-Tiered Architecture
 - Electronic Forms

- **Electronic Collaboration** - Defines the roles, standards and infrastructure components that facilitate the interaction of the workforce and promote group productivity. These include e-mail, directory services, and other person-to-person or group collaboration tools.
 - **Technology Areas**
 - Email
 - Calendaring and Scheduling
 - Messenger services
 - Workgroups
 - Messaging Boards
 - Chat rooms



Systems Management Domain

The Systems Management domain defines the roles, standards, policies, and technologies for monitoring and controlling components of all collective hardware and software within the State's information system infrastructure. Systems management includes the automation and control of platforms and associated resources, networks, and applications and the coordination and control of work flowing through the infrastructure systems. It focuses on issues of change management, event and state management, fault detection and isolation, performance measurement, problem reporting, and system training.

Disciplines

- **Asset Management** - Defines the roles, standards and systems required for the tracking and reporting of assets owned by the government entity including: software licensing, metering, asset tracking, asset replacement, asset retirement, software distribution, and inventory. Other tasks associated with asset management include, but are not limited to the tracking of service level agreements, capacity management, cost management, and personnel skills inventory.
 - **Technology Areas**
 - Asset Tracking
 - Bar Coding
 - Life Cycle Management
 - Service Level Agreements
 - Cost Management against Licensing
- **Change Management** - Defines the roles, standards, and technologies for version control and deployment of all IT assets through the development environments, test environments, and finally the production environment.

- **Technology Area**
 - Version Control
 - Test Environments
 - Source Code Repositories
 - Deployment Process
- **Console/Event Management** - Defines the roles, standards, policies, and technologies for monitoring and controlling components of all collective hardware and software within the entity's data center, including large and mid-range systems.
 - **Technology Areas**
 - Monitoring Hardware
 - Monitoring Submitted Jobs
 - Execution of End of Period Jobs
 - Print Queues
 - Back-ups
 - Performance Monitoring
- **Help Desk/Problem Management** - Defines the roles, standards, policies, and technologies for monitoring and controlling problem reporting and resolution.
 - **Technology Areas**
 - Single point of contact for IT related issues
 - Problem Reporting
 - Problem Resolution
 - Escalation of Problems
 - Issue Tracking
 - After-hours-on-call
- **Business Continuity** - Defines the roles, standards, policies, and technologies for disaster recovery and restoring the enterprise to full functionality.
 - **Technology Areas**
 - Disaster recovery
 - High Availability
 - Fail-over
 - 24x7 Support

Security Domain

The Security domain defines the roles, technologies, standards, and policies necessary to protect the information and technology assets of states and their citizenry from vandalism, theft, and any other form of unauthorized access. The Security domain defines the security and access management principles that are applied to ensure the appropriate level of protection for the States' information technology assets.

Disciplines

- **Enterprise Security:** Defines the roles, standards, policies, audits, and business process reviews for monitoring and ensuring the security across the State's enterprise. Includes securing the physical assets from theft and vandalism.
 - **Technology Areas**
 - Physical Security
 - Security Administration
 - Social Engineering/Human Factors
- **Network Security:** Defines the roles, standards, policies, and tools for monitoring and ensuring the security across the State's network.
 - **Technology Areas**
 - Network Security
 - Web security.
 - Electronic Transaction Security
- **Host Security:** Defines the roles, standards, policies, and tools for monitoring and ensuring the security across the State's platform infrastructure.
 - **Technology Areas**
 - User Security
 - Application Security
 - System Security
 - Data Security

Privacy Domain

The Privacy domain addresses the balance between use of shared information and privacy concerns of citizens and agencies with well-defined roles, policies, procedures, and technologies. In addition, the Privacy domain addresses all state and federal laws related to privacy issues such as the distribution, availability, notification or permission to distribute, and privacy violation notification. The Privacy domain focuses on the authorized and unauthorized viewing, acquisition, and/or use of information about a person, case, or other classified activity.

Disciplines

- **Profiling:** Defines the roles, standards, policies, audits, and tools used for creating, maintaining, and utilizing profiles for the various stakeholders of the State's services.
 - **Technology Areas**
 - Employee Profiles
 - Customer Profiles
 - Vendor Profiles
- **Personalization** – Defines the roles, standards, policies, audits, and tools used for creating, maintaining and implementing personalization of services and information.
 - **Technology Areas**
 - Qualified Personalization
 - Requested Personalization
 - Analysis Personalization
- **Privacy** – Defines the roles, standards, policies, and audits used to communicate, and verify that the rights of the individual are being adhered to in the automated and manual processes.
 - **Technology Areas**
 - Organizational (Agency) Privacy
 - Enterprise (Statewide) Privacy

APPENDIX E – EA Repository Manager Overview

Introduction

The Enterprise Architecture Repository is set up as an interim solution for managing the Architecture documents at all stages of the Architecture Lifecycle. This document will include information pertaining structure and naming conventions, as well as procedures from the Management and Domain Committee perspective. A brief walk-through example is also included in each of these sections.

The procedures for the Domain Committee are documented in Appendix F – Domain Committee Repository Procedures.

The Enterprise Architecture Repository (EA Repository) is a file structure set up to maintain the various Enterprise Architecture Documents including:

- MAEA Program
 - Part I – Architecture Administration
 - Part II – Architecture Processes & Templates
 - Part III – Appendices
- Architecture Blueprint Information
 - Domains
 - Disciplines
 - Technology Areas
 - Product Components
 - Compliance Components
- Enterprise Architecture Communication Documents

The EA Repository also provides the ability to view the EA Documents at various stages of the Architecture Lifecycle, identified by the following status terms:

- In Development
- Under Review
- Accepted
- Rejected

Enterprise Architecture Repository Tree Structure Overview

The EA Repository tree structure allows the Users and Administrators of the EA Documents to manage the documentation, review and communication efforts for all EA information.

There are 4 primary folders in the EA Repository tree structure:

- Communication
- Arch Review
- BP Prod (Blueprint Production)
- MAEA Program

The Architecture Communication tree provides a folder to hold all incoming and outgoing information from the *Architecture Communication Process*, which is detailed in MAEA Program Part II – Chapter 3.

The Architecture Communication tree holds the following EA information:

- Architecture Information Requests: the requests that have been sent to the Architecture Office's office to solicit specific EA information
- Periodic Communications: the historical copies of EA communications that have been provided to the IT community to market and communicate the EA program progress
- Special Requests: the historical copies of the EA communications sent to specific requestors, which are in addition to the periodic communications

The Architecture Review tree provides a folder to hold all incoming and outgoing information from the *Architecture Review Process*, which is detailed in MAEA Program Part II – Architecture Processes & Templates Chapter 2.

The Architecture Review tree structure is a temporary holding place for Architecture Blueprint information that is ready for review, or is in the process of being reviewed. Once the review is complete, the information will be moved to the BP Prod (Blueprint Production) tree for final storage. The Architecture Review tree holds the following EA information:

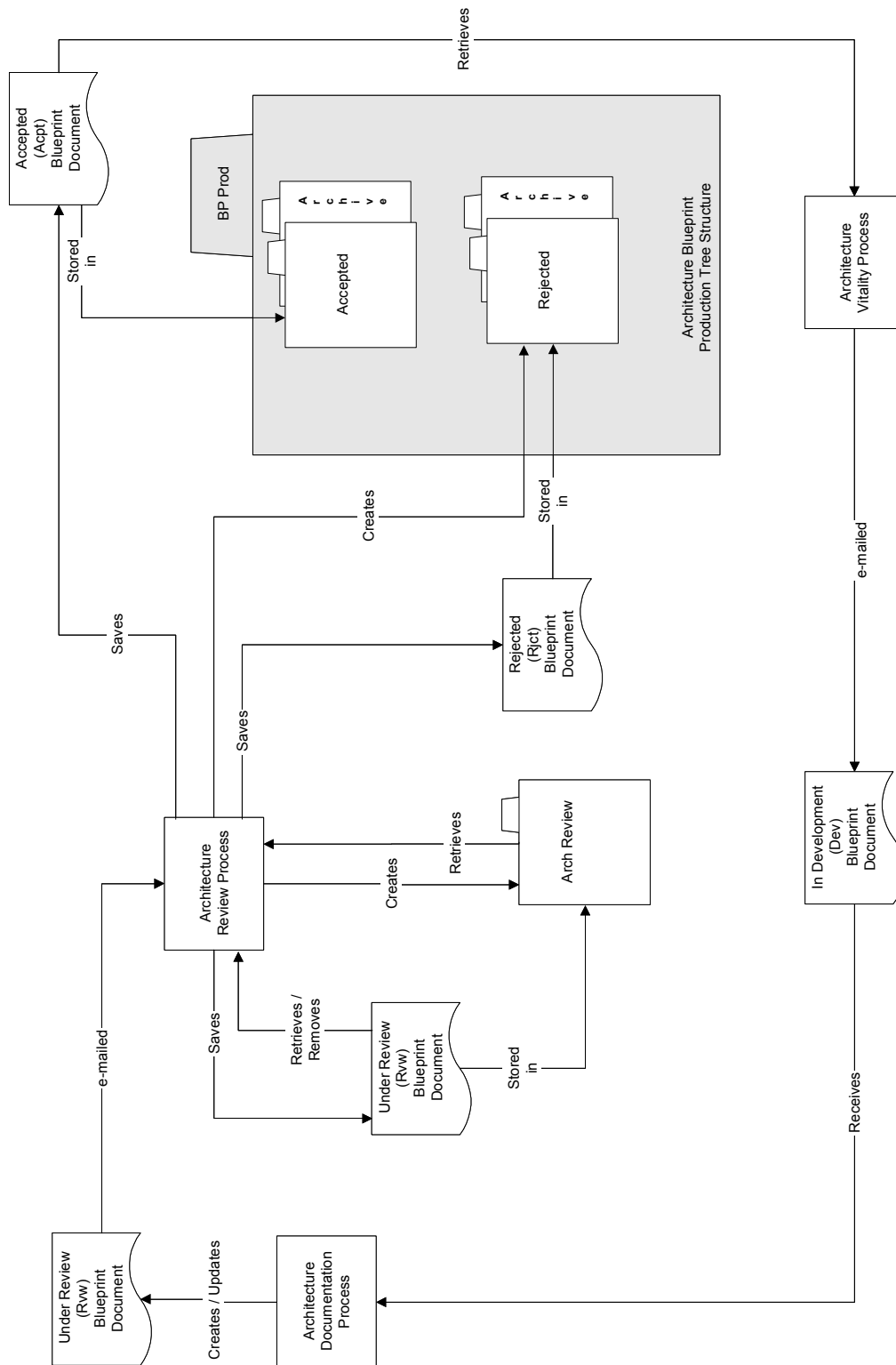
- Domains: Draft Blueprint items ready for review during the normal periodic review sessions will be included in this tree structure. This folder structure follows the same hierarchy used for the Architecture Blueprint levels.
- Special Review: This folder is used for documents that require a special review for either a variance or MAEA Program enhancement.

The BP Prod (Blueprint Production) tree structure provides a set of folders to hold all Accepted and Rejected versions of the Architecture Blueprint and the Cross Reference Spreadsheet. This tree structure is the permanent holding place for Architecture Blueprint information.

The BP Prod (Blueprint Production) tree holds the following EA information:

- Accepted: This folder structure holds all the accepted versions of the Architecture Blueprint. This folder structure follows the same hierarchy used for the Architecture Blueprint levels.
- Cross Reference Spreadsheet: This folder holds the current and historical versions of the Cross Reference Spreadsheet. This spreadsheet is used to check in and out the various EA documents, and keep track of the ownership of the various pieces of the Architecture Blueprint.
- Rejected: This folder structure holds all of the rejected versions of the Architecture Blueprint. This folder structure follows the same hierarchy used for the Architecture Blueprint levels.

Enterprise Architecture Repository Document Flow



This diagram shows the flow of the Architecture Blueprint documents from the Architecture Documentation Process through the Architecture Review Process. As the documentation moves through the flow, the status of the documents will change.

As the documents are being created or updated, the status is “In Development.” During this development stage, documents are the property of the Domain Committees. The Domain Committees are responsible for the storage and versioning of documents while they are in development. The documents that are “In Development” are not stored within the Repository.

When the documents are ready for review, the document status is changed to “Under Review” and the document is e-mailed to the Architecture Office, to be placed in the Arch Review tree structure. Folders may need to be created to house the new documentation.

Once the review is complete, the Architecture Office will move the document from the Arch Review folders to either the Accepted or the Rejected folder in the Blueprint production (BP Prod) tree. The status of the documentation will also be changed to “Accepted” or “Rejected” as appropriate.

When a document is checked out, the documentation cycle begins again for that document.

The *Vitality Process* will also initiate the cycle for documentation that requires review.

Architecture Blueprint Tree Structure

The Architecture Blueprint tree structure can be found in three places in the EA Repository:

- Architecture Review (Arch Review) tree structure
- Blueprint Production (BP Prod) tree – Accepted folder
- Blueprint Production (BP Prod) tree – Rejected folder

This tree structure addresses the levels of the Architecture Blueprint. The following folders are in the trees:

Domains

The Domains folder will contain sub-folders, but will contain no files. The name of each sub-folder matches the corresponding Architecture Blueprint Domain name and each sub-folder contains the information specific to that Domain.

The following list includes Domains currently approved by the Architecture Review Committee:

- Application
- Information

- Infrastructure
- Integration
- Interface
- Privacy
- Security
- Systems Management

Disciplines

The Disciplines folder, under each Domain, will contain sub-folders, but no files. Each sub-folder contains the information for one Architecture Blueprint Discipline associated with a specific Domain. The name of each sub-folder matches the corresponding Architecture Blueprint Discipline name and each sub-folder contains the information specific to that Discipline.

As an example, the Information domain folder would have the following Disciplines:

- Data Management
- GIS
- Knowledge Management

A complete list of Domain/Discipline associations is located in APPENDIX D – Domains and Disciplines.

Technology Areas

The Technology Area folder, under each Disciplines folder, will contain sub-folders, but will contain no files. Each sub-folder contains the information for one Architecture Blueprint Technology Area associated with a specific Discipline. The name of each sub-folder matches the corresponding Architecture Blueprint Technology Area name and each sub-folder contains the information specific to that Technology Area.

This level of the Blueprint is defined by the Domain Committees.

Product Components

The Product Components folder, under each Technology Area folder, will contain sub-folders, but will contain no files. Each sub-folder contains the information for one Architecture Blueprint Product Component associated with a specific Technology Area. The name of each sub-folder matches the corresponding Architecture Blueprint Product Component name and each sub-folder contains the information specific to that Product Component.

This level of the Blueprint is defined by the Domain Committees.

Compliance Components

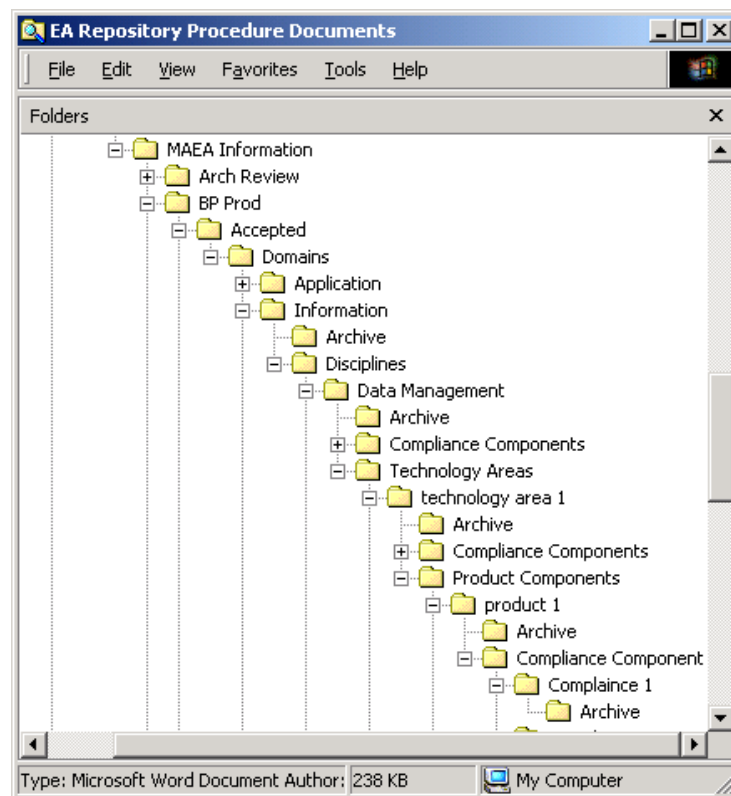
The Compliance Components folder will contain sub-folders, but will contain no files. Each sub-folder contains the information for one Architecture Blueprint Compliance Component. This folder can be set up within 3 different levels of the Architecture Blueprint:

- Under a specific Discipline
- Under a specific Technology Area
- Under a specific Product Component

This level of the Blueprint is defined by the Domain Committees.

Blueprint Production (BP Prod) Tree Example

This section provides an example of the tree structure.



The Information domain and the Data Management discipline are used in this example. For the Architecture Office, the BP Production (BP Prod) tree is the primary tree for all of the Architecture Information.

There are two types of folders found within the Accepted folder, the “level” folders and the Architecture Blueprint “specific” folders. **Note:** Control of all folders in BP Prod belongs to the Architecture Office.

Each “*level*” folder has the following qualities:

- Only Architecture Blueprint-specific folders are stored at this level
- Folder names match the Architecture Blueprint item they are containing
- No documentation is kept in this folder

The following are the “Level” folders:

- Domains
- Disciplines
- Technology Areas
- Product Components
- Compliance Component (This folder can be under specific Disciplines, Technology Areas or Product Components)

Each “*specific*” Architecture Blueprint item folder has the following qualities (except where noted):

- This folder has the 2 standard folders that are included at each level of the Architecture Blueprint:
- Archive – Contains historical working copies are stored in the Archive folder.
- “*Level*” folders - Contains the folders for the next level of the Architecture Blueprint.
- There are documents stored in the folder.

The current production copy of the document is stored in the Architecture Blueprint “specific” folder. If no document is in this folder, there is no production document for the Architecture Blueprint item.

The following steps walk through an example of the procedure to retrieve information for “Accepted” Architecture Blueprint items:

1. Select the “Accepted” folder
 - Includes all documentation for “accepted” Architecture Blueprint items.
 - This folder will contain no files.
2. Select the “Domain” folder
 - This is a “*level*” folder.
 - Folder names match Architecture Blueprint Domain names.
3. Select the “Information” folder
 - This is a “*specific*” Domain folder.
 - The Domain level of the Architecture Blueprint has only one level defined directly below it: Disciplines.

4. Select the “Disciplines” folder
 - This is a “*level*” folder.
 - Folder names match Architecture Blueprint Discipline names.
5. Select the “Data Management” folder
 - This is a “*specific*” Discipline folder.
 - Two levels are defined directly below the discipline level of the Architecture Blueprint:
 - Technology Areas
 - Discipline-level Compliance Components
6. Select the “Technology Areas” folder
 - This is a “*level*” folder.
 - Folder names match Architecture Blueprint Technology Areas names.
 - At the beginning of the Architecture Blueprint creation, mock technology areas were created to show the structure. This is represented with the following folders:
 - Technology area 1
 - Technology area 2
7. Select the “technology area 1” folder
 - This is a “*specific*” Technology Area folder.
 - Two levels are defined directly below the technology area level of the Architecture Blueprint:
 - Product Components
 - Technology Area-level Compliance components
8. Select the “Product Component” folder
 - This is a “*level*” folder.
 - Folder names match Architecture Blueprint Product Component names.
 - At the beginning of the Architecture Blueprint creation, mock product components were created to show the structure. This is represented with the following folders:
 - Product 1
 - Product 2
9. Select the “product 1” folder
 - This is a “*specific*” Product Component folder.
 - There is only one level defined directly below the Product Component level of the Architecture Blueprint, the Product Component-level Compliance Components.

10. Select the “Compliance Component” folder

- This is a “*level*” folder.
- Folder names match Architecture Blueprint Compliance Component names.
- At the beginning of the Architecture Blueprint creation, mock product components were created to show the structure. This is represented with the following folders:
 - Compliance 1
 - Compliance 2

11. Select the “compliance 1” folder

- This is a “*specific*” Compliance Component folder.
- This folder has only one of the standard folders that are included at each level of the Architecture Blueprint:
 - Archive – Contains historical working copies are stored in the Archive folder
- There are no further levels defined below the Compliance Component level of the Architecture Blueprint.

Versioning and Saving Documents

Checking Out/In EA Blueprint Documents

This section contains the Checkout/Check-in procedures to be followed by the Architecture Office to check out/in the EA Blueprint documentation to and from the Domain Committees.

Check out

Note: You could consider having a document checked out to more than one group at a time, but a merge would need to occur.

1. Review the e-mail request by the Domain Committee for specific documents
2. Check Cross Reference Spreadsheet to determine whether the documents are currently available for check out.
 - a. If the requested documents are not available, notify Domain Committee and work with the current owner of the document to determine when it will be available.
 - b. If the document is available, the Architecture Office will update the Cross Reference Spreadsheet to denote the document as checked-out.
3. Change the document status to “In Development”
4. Architecture Office will e-mail the EA documentation to the Domain Committee Chairperson.

Check in

1. Review the e-mail sent to Architecture Office, stating that documentation is ready for Review
2. Architecture Office will retrieve the document from the e-mail account and place it in the Arch Review – Architecture Blueprint folder at the appropriate level. If it is a new level of the blueprint the Architecture Office will need to create the folder under the appropriate level in the tree structure.
3. The Architecture Office will update the Cross Reference Spreadsheet to denote the document as checked-out to the ARC.
4. Once review is complete, the Architecture Office will move the documentation from the Architecture Review folder to the BP Production (BP Prod) sub-folder (either “Accepted” or “Rejected”), as appropriate. (See Finalizing Reviewed Documents for the complete details on storing the documents in the BP Production folders.)
5. Architecture Office will update the Cross Reference Spreadsheet to denote the document as checked-in.



Finalizing Reviewed Documents

After the final determination of “Accepted” or Rejected” has been made by the review committees, the reviewed documents will be finalized. The reviewed documents must be removed from the Architecture Review tree and placed in the BP Production (BP Prod) tree. The document is either an “Accepted” document or a “Rejected” document. Both procedural steps are outlined below:

Accepted Documents:

- Open document and update:
- Current status
- Audit stamp information
- Save document as:
- ACPT_[release#][level][document name][date]
- Save in BP Production (BP Prod) tree under the Accepted folder
- If a previous release of this document existed, move the previous release of the document to the Archive folder at the appropriate level of the blueprint.
- Delete the review release of the document.
- Create PDF
- Publish to the Web

Rejected Documents:

- Open document and update:
- Current status
- Audit stamp information (including reason rejected.)
- Save document as:

- RJCT_[release#][level][document name][date]
- Save in BP Production (BP Prod) tree under the Rejected folder.
- If a previous release of this document existed, move the previous release of the document to the Archive folder at the appropriate level of the blueprint.
- Delete the review release of the document from Arch Review tree.

Communication Document Flow

The Communication Document flow is still to be determined.

Miscellaneous EA Repository Concepts

Document Status: The stage in the lifecycle is captured at each of the Architecture Blueprint levels in a field titled Current Status.

The following states exist:

- **In Development** – The status is used when the document content is being developed for the first time or is being updated during a vitality process. The status is the same, regardless of what triggered the document content to go through the *Architecture Documentation Process*.
- **Under Review** – Once the Domain Committees are complete with the *Architecture Documentation Process*, the document is ready for review. The status of “Under Review” is used throughout the *Architecture Review Process* until the final decision to accept or reject the information is determined.

The last step in the Architecture Review Process is to denote the final decision of the Architecture Review Committee.

- **Accepted** –If the committee chooses to accept the architecture blueprint’s information, the status of the document is changed to “Accepted”.
- **Rejected** –If the committee chooses to reject the architecture blueprint information, the status of the document is changed to “Rejected”.

Naming Standards

A primary goal of Repository Management is to provide a means for storing and retrieving information in a timely fashion. Naming standards play an important role in making this possible.

Following are the current naming standards utilized within the Enterprise Architecture Repository.

Folder Naming Standards

- Archive – Used to store historical versions of documents
- BP Prod (Blueprint Production) Archives –allows the Architecture Office to store previous versions of the Architecture Blueprint documents.
- MAEA Program Archive –allows the Architecture Office to keep previous versions of the MAEA Program, as well as supporting manual documentation, such as training material and templates.

Blueprint Release Numbers

A new release number is created for each periodic review. This number reflects the scheduled Architecture Blueprint release. Release numbering is used for documents having a status matching any of the following:

- Review – Documents scheduled for review during this release period
- Accepted – Documents accepted during this release period
- Rejected – Documents rejected during this release period

The Cross Reference folder contains a spreadsheet called: Release Numbers.xls

When creating a new release, add the following information to the appropriate sheet:

- New release number
- Date of release
- Comments (Major deliveries contained in this release.)
- Links to other documentation that would be useful regarding this release
- Review Committee meeting notes
- Vitality documentation

Document Naming Standards

- Architecture Blueprint Documents:

[status]_[release#][level][document name][date]

Example: **Rvw_1 DSP Data Mgmt 6-25-02.doc**

Status (current document status)

- Rvw – Under Review
- Acpt – Accepted
- Rjct – Rejected

Release (As needed for multiple releases of the Architecture Blueprint)

- Numeric character

Level (Architecture Blueprint Level)

- DMN – Domain
- DSP – Discipline
- TA – Technology Area
- PC – Product Component
- CC – Compliance Component

Document name (Brief document title)

Date (date document was last updated)

- mm-dd-yy

Architecture Communication Documents

- TBD

Help Request

- TBD

APPENDIX F – Domain Committee Repository Procedures

Creating Architecture Blueprint Details

The Domain Committee is in charge of completing and updating the Domain and Discipline Architecture Blueprint documents for their Domain. They are also in charge of creating and updating the Technology Area, Product Component and Compliance Component Architecture Blueprint documents.

The Domain Committees will be provided with their Domain and Discipline Architecture Blueprint documents after completing the Session II education. These need to be completed and sent to the Architecture Office for review prior to beginning to populate the remainder of the Architecture Blueprint documents.

Once the Domain and Discipline levels of the Architecture Blueprint are completed for a specific Domain, the committee can retrieve the templates for the other levels of Architecture and begin to populate those Architecture Blueprint documents.

After updating the documents, the Domain Committee sends the items to the Architecture Office for review. When the document has gone to review, any further work on that document should halt. To start to work on it again, the Domain Committee must contact the Architecture Office to “check-out” a copy from the Production Enterprise Architecture Repository. Check-out and check-in procedures are documented later in this Appendix.

Using Templates

The Missouri Adaptive Enterprise Architecture utilizes a set of templates to aid in building a consistent set of Architecture Blueprints. Templates are also used for communication between the various Architecture committees and to the IT personnel.

The Architecture Blueprint Templates (as defined in the MAEA Program Part II) can be found in the MAEA Program tree under the folder: *Templates*.

The Architecture Documentation Process, found in the MAEA Program Part II - Chapter 1, aids in the steps that are defined to complete the templates, as well as template details to help in defining each attribute in the template.

- Communication Templates – TBD
- Miscellaneous Templates – TBD (Includes Help Requests, recommended MAEA Program Enhancements, etc...)

Checking Out/In EA Blueprint documents

The Checkout/Check in procedures should be followed prior to working on any of the EA Blueprint documentation.

Check-Out

1. Send an e-mail to the Architecture Office mailbox (TBD), requesting the specific documents to work on.
2. The Architecture Office will denote in the Cross Reference Spreadsheet that the document as checked out.
3. Architecture Office will e-mail the Domain Committee Chairperson the Architecture Blueprint documents requested.
4. Domain Committee can work on the documents

Check-In

1. When the document is ready for review (and check-in), e-mail the document to the Architecture Office mailbox (TBD).
2. The Architecture Office will retrieve the documentation that is ready for review, and place it in the Architecture Review folders.
3. Architecture Office will update the Cross Reference Spreadsheet to denote the document as checked out to the ARC.
4. Once review is complete, the Architecture Office will move the documentation from the Arch Review folder to the BP Prod (Blueprint production) sub-folder (either “Accepted” or “Rejected”) as appropriate.
5. Architecture Office will update the Cross Reference Spreadsheet to denote the document as Accepted/Rejected.

Viewing EA Blueprint documents

TBD (Based on Web Publishing)

Word Document Properties

Microsoft Word has properties that can aid in locating a document. During the time when the Missouri Adaptive Enterprise Architecture utilizes Word to document the Architecture Blueprint information, the following Word Document Property procedures will be in place.

- Title - specific blueprint item name
- Subject – items such as parent blueprint level name,
- Author – Domain Committee name
- Manager – Domain Committee Chairperson

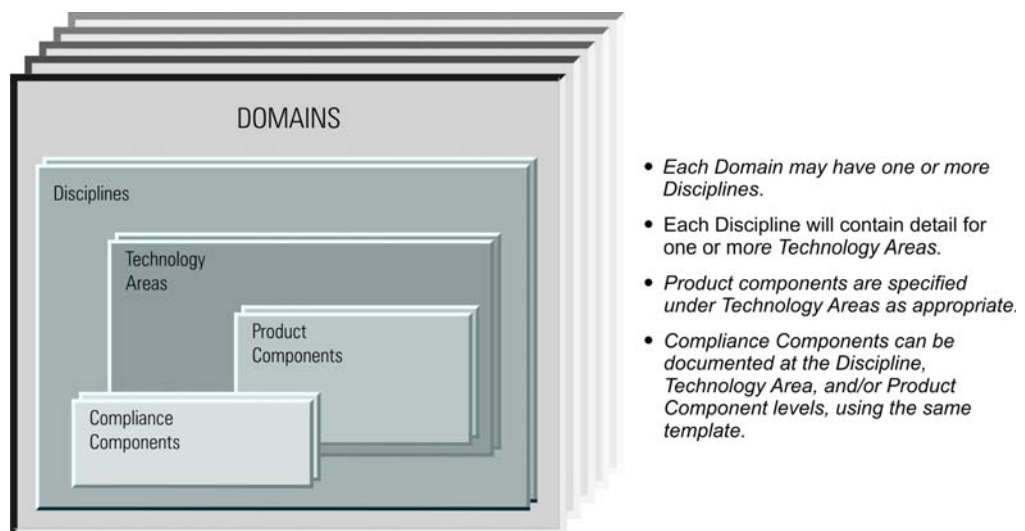
- Company –
- Category –
- Keywords –
- Comments –
- Custom Fields – Items such as Checked-out field

The remaining details of this section are still being determined.

APPENDIX G – MAEA Framework Entity Model

The Missouri Adaptive Enterprise Architecture Blueprint is the collection of structured dynamic data that defines and categorizes the products, configurations and compliances (guidelines, standards, and/or legislation) regarding the technologies in use or being considered within the State that have broad enterprise-wide impact. Its purpose is to provide a context for articulating the disparate technologies required to support the business of the State of Missouri.

The MAEA Architecture Blueprint begins with a conceptual framework that provides a simple and familiar structure that can be used to understand how the components of technology are related to and interact with each other. The result is the framework represented by the figure below that portrays the components and views of the MAEA.



As can be seen in the graphic, the MAEA Architecture Blueprint is broken out into five major levels that work together to ensure complete documentation of the Missouri Enterprise Architecture. This model is intended to provide a high-level overview of the information created and maintained by Domain Committees as documented in Part II of the MAEA Manual.

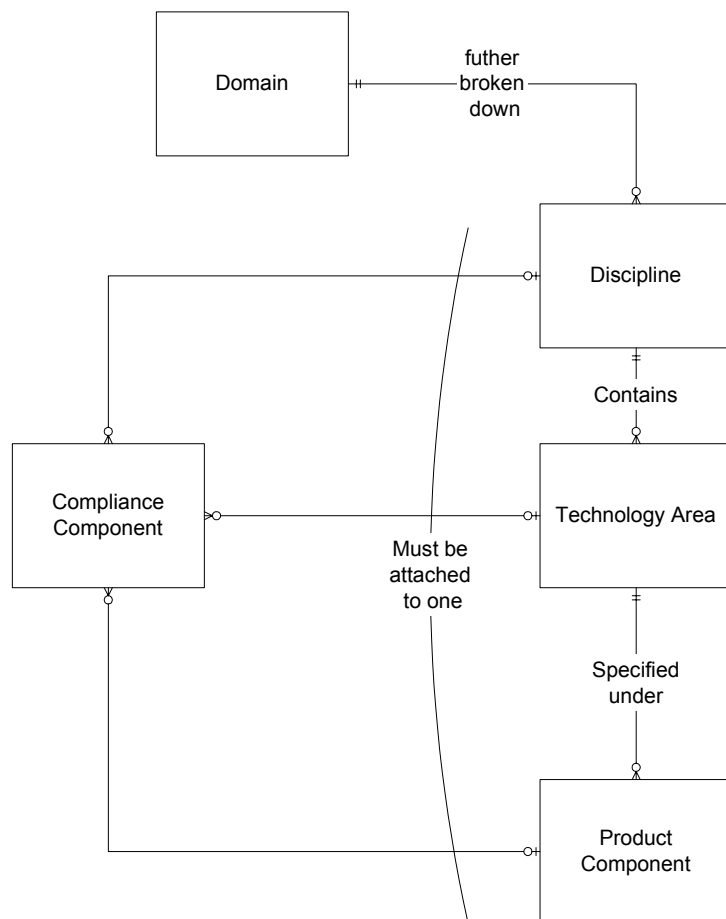
The MAEA Architecture Blueprint is conceptually an information repository. Therefore, the framework diagram above can also be depicted in a more traditional industry accepted information model format. There are several industry formats that are used as a basis for information models but by far the dominant technique is called an Entity-Relationship Model.

MAEA Entity-Relationship Model

An Entity-Relationship modeling approach is a graphical modeling technique. An *Entity* is a class of something about which the enterprise needs to store information. In the MAEA Framework, the entities include DOMAINS, DISCIPLINES, TECHNOLOGY AREAS, PRODUCT COMPONENTS, COMPLIANCE COMPONENTS. Each entity represents a set of things at a particular point in time (for example the current set of relational database products).

Central to an entity-relationship diagram are the relationships between entities. Entities are usually represented graphically as rectangular boxes and relationships are denoted by the lines joining the boxes. These relationships are denoted with “crows-feet” to indicate possible multi-valued and/or optional relations when necessary.

An entity-relationship diagram representing the Missouri Adaptive Enterprise Architecture Framework is shown below.



Domains are the top level entity and represent the natural divisions of the technology architecture that form the main categories of the Technology Architecture Blueprint. A Domain comprises a group of related technologies usually organized around common Information Technology (IT) services or information management functions. Domains can be further broken down into Disciplines.

Disciplines are the logical functional subsets of a Domain. Disciplines allow for further breakdown of the Domain into manageable pieces, especially for Domains that cover large and/or diverse topics. Disciplines may contain multiple Technology Areas and may have associated Compliance Components.

Technology Areas are those technical items or topics that support the functional aspects of the Disciplines. Technology Areas are the logical sub-topics where products and/or

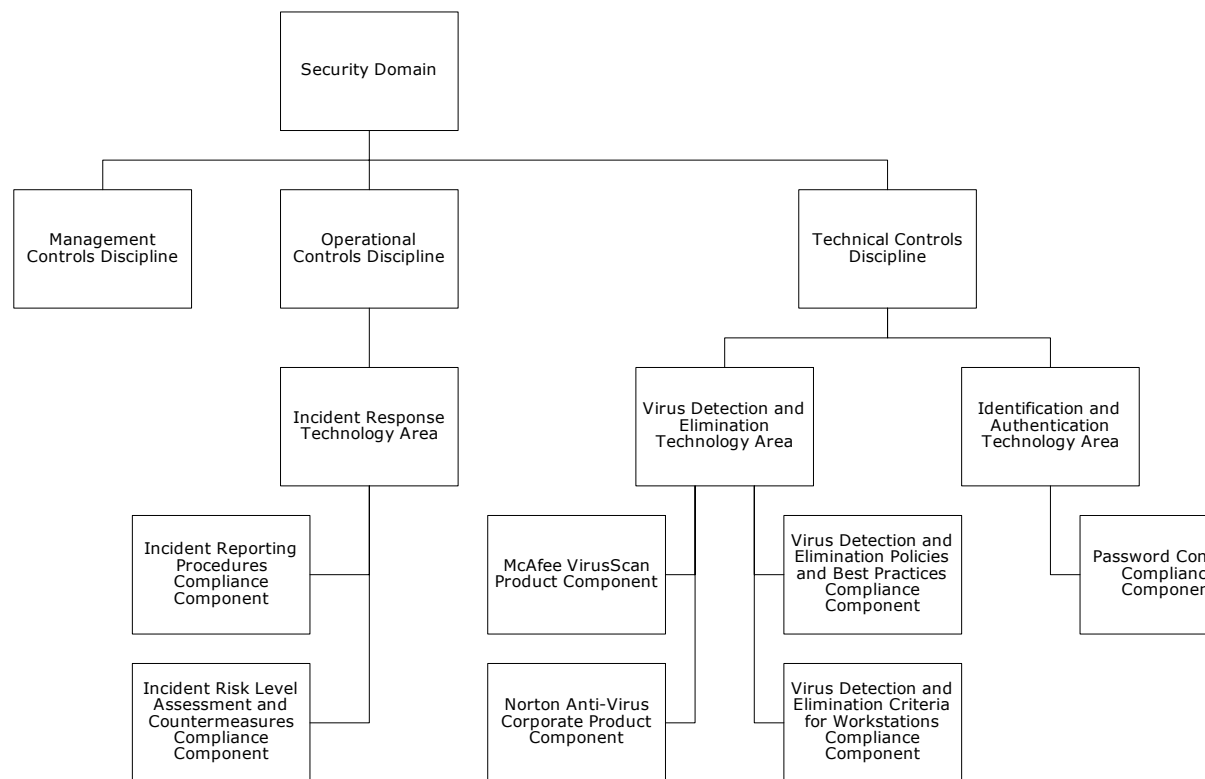
compliance criteria are applied to begin to form the details of the Technology Architecture Blueprint.

Product Components include the products or product families that are specific to a Technology Area. Products may also be associated to a particular compliance component.

Compliance Components are the guidelines, standards, and mandates that can be documented at the Discipline, Technology Area, and/or Product Component level and provide the basis for making important decisions about new products, protocols, configurations, etc.

MAEA Entity-Relationship Example

Using actual assets from the Security Domain Architecture Blueprint, the diagram below provides a visual example of how the MAEA Entity-Relationship model is applied in real world formalism.



APPENDIX H – EA Component Evaluation Workbook

Introduction

A critical step in the Architecture Documentation Process (covered in MAEA Part II – Chapter 2) is to determine the classification of product and compliance components. The classifications include:

- **Sunset** – Components that are in use, but do not conform to the stated architecture direction, are classified as Sunset if the date of discontinuance has been identified. The date of discontinuance indicates the date that the Component will no longer be acceptable for use within the architecture.
- **Twilight** - As with Sunset, the components with this classification are in use, but do not conform to the stated architecture direction. However, these have no date of discontinuance identified. These Components should not be used to develop new applications. Extensive modifications to these systems require review to determine if they can/should be redeployed completely using newer technology.
- **Current** – This classification is given to those components that meet the requirements of the architecture. These recommended Components should be used in deployment of technology solutions.
- **Emerging** – This classification is given to components that have the potential to become current. While identified as “Emerging” these Components should be used only in pilot or test environments, under very controlled regulations. After sufficient testing, these Components may be identified as “Current”, or may be determined not architecturally compliant or functional within the State environment. Use of these components requires a variance that must be documented and approved through the Architecture Compliance Process, which is documented in the MAEA Part II – Chapter 4.

In order to develop consistent evaluation of the components associated with Enterprise Architecture, there must be objective selection and evaluation criteria. The following matrices are used for making objective assessments of product and compliance components for the purpose of determining classification.

- **Common Business Fit** – The Component being evaluated must address the common functional business criteria. This part of the evaluation should include information on current and pending release levels. Families of products should also be considered when relevant.
- **Global Technical Fit** – The Component being evaluated must be consistent with the current and planned technical environment across all domains.
- **Global Operational Fit** – The Component being evaluated must meet the systems and other management requirements for operating and supporting the service level agreements in a specific environment.

The primary users of these fit matrices are the Domain Committees. The criteria and priority/weighting of the criteria are provided as a result of coordination between the

Architecture Review Committee (ARC), Architecture Technical Committee (ATC) and the office of the Architecture Office.

All suggestions for enhancements to the matrices should be emailed to the Architecture Office for consideration. Updates to the fit matrices will occur as part of the *Architecture Change Management Process*. For further detail see MAEA Part II – Chapter 6.

The fit matrices are contained in an Excel workbook named *EA Component Evaluation.xls*, which can be accessed on the Web.

Layout

The EA Component Evaluation workbook has been developed to provide a consistent and simplified process of evaluation. For example, though there are several matrices, the component names are entered only once and, with the exception of text fields for comments, drop-down lists are provided for choosing the appropriate responses.

The EA Component Evaluation workbook contains five basic types of pages:

- Setup Page
- Fit Matrices (one matrix for each set of “Fit” criteria)
- Mandatory Review sheets (one to accompany each matrix)
- Evaluation Totals sheet
- Help Page

These follow the flow of the evaluation, as detailed in the following paragraphs.

Setup Page

Filling out the information on the Setup Page starts the evaluation process. The following fields should be filled in to provide the history of the evaluation:

- Evaluation Date – Enter the date of the evaluation.
- Evaluation Team – Enter the names of the individuals that participated in the evaluation
- Blueprint Level Names – Enter the specific Domain, Discipline, Technology Area and/or Product Component with which the Product/Compliance Components are associated.

After the historical information is completed, list the Product and/or Compliance Components to be evaluated. The Product / Compliance Component names supplied on the Setup Page will populate each of the fit matrices and mandatory review pages, as well as the *Evaluation Totals* page. This name should match the name on the completed Blueprint template for that Product / Compliance Component.

Please note: Because the names will be used in numerous places throughout the workbook, it is necessary to limit the component names to 20 characters. However, an

Expanded Description column can be used to provide additional information about the component.

Matrices

On these sheets, the Evaluators will rate each Product / Compliance Component against the criteria provided. Each sheet covers one of the following topics and associated categories:

Common Business Fit

The Product / Compliance Component being evaluated must address the common business criteria. This sheet of the evaluation will address items related to business functionality under the following categories:

- Customer / Stakeholders
- Vendor
- Product / Service
- Organization
- Other Common Business Requirements

Global Technical Fit

The Product / Compliance Component being evaluated must be consistent with the current and planned technical environment. This sheet of the evaluation will address items related to the technical fit under the following categories

- Enterprise Architecture Requirements
- Interface (Branding, Access, and Accessibility)
- Information (Data Mgmt, Knowledge Mgmt, GIS)
- Infrastructure (Network, Platform)
- Integration (Middleware, Functional Integration)
- Application (Application Engineering, Electronic Collaboration)
- Security (Enterprise Security, Network Security, Host Security)
- Privacy (Profiling, Personalization, Privacy)
- Other Global Technical Requirements (Some vendor criteria is covered here.)

Global Operational Fit

The Product / Compliance Component being evaluated must meet the systems and other management requirements for operating and supporting the service level agreements in a specific environment. This sheet of the evaluation will address items related to operational fit under the following categories:

- Asset Management
- Change Management

- Console/Event Management
- Help Desk / Problem Management
- Business Continuity
- Other Global Operational Requirements

The primary purpose of the fit matrices is to provide a means for rating the components against the fit criteria statements. The layout for each of the matrices and the process for entering the ratings are the same for each matrix. A sample of the Global Operational Fit matrix is provided here to help explain the process for applying the ratings, as well as the items and features that will appear in each of the matrices.

Global Operational Fit									
Component 1				Component 2		N/A			
Criteria	Weight Priority	Rating	Weighted Score 1	Rating	Weighted Score 2	Weighted Score 3	Notes/ Comments		
Asset Management									
1 Supports Asset Tracking methods such as: - Physical inventory - Bar coded assets - Software Monitored asset tracking	4	2	8	2	8		0		
2 Supports Software Licencing methods:	3	3	9	3	9		0		
3 Vendor Maintenance Agreements must exist for all products.	4	3	12	3	12		0		
4 Life Cycle Management for all products must be documented.	0	3	0	3	0		0		
5			0				0		
6			0				0		
7			0				0		
8			0				0		
Sub-Total: Asset Management		33		29		29		0	

There are three basic steps for the evaluation team to complete for each matrix:

- Determine whether a criteria statement is pertinent for this evaluation (#4)
- Rate each component, per criteria (#5)
- Add comments, if necessary. (#7)

Sheet Tips

These numbered items match the numbered circles on the sample.

1. The Product / Compliance Component names (as entered on the Setup Page) are supplied, in row 1. Where no component name was entered “N/A” appears.
2. The ability to Group/Un-group components for review is provided. For this example three component columns are showing (Test 1 and two N/As). Evaluators can use the grouping buttons at the top to hide or show the desired number of

columns. (To show 3 component columns, click on 3; to show all 7, click on 7; etc.)

3. The criteria statements for evaluating each of the components is supplied by the State, as are the values for the Weight /Priority. The Weight/Priority shows the importance of each criteria statement. Note that for the fit evaluations, the Weighted/Priorities of “1” and “2” are not valid.

The maximum score possible for each category will appear as sub-totals in the Weight/Priority column as well. The maximum score is the total of the weighted priority, multiplied by the maximum rating available. The following table contains the Weight/Priority definitions.

WEIGHT/ PRIORITY	WEIGHT/PRIORITY DEFINITION	EXPANDED DEFINITION
1	Nice to Have	<u>Not used for the Fit Matrices.</u> This item is used for the requirements matrix.
2	Medium Priority	<u>Not used for the Fit Matrices.</u> This item is used for the requirements matrix.
3	High Priority	Significant feature for this business function. If the software does not have this functionality, research both on alternatives, work around, or cost of software modification.
4	Must Have	<u>Show Stopper</u> if the requirement is not met. Critical, must have / core requirement for the business function. If the software has this functionality, make sure it meets our expectations through a demo or site visit. If the software does not have this functionality, research both on alternatives, work around, or cost of software modification.

4. There may be certain criteria statements that are not pertinent for the given evaluation. By changing the “+” to a “-”, the item will not be included in the evaluation. Note that for these “-” items the Weight/ Priority changes to “0”.
5. There is a ratings column for each component. Ratings are entered by choosing the appropriate value (0-3) from the drop-down list. Note that a comment is included with each Rating heading as a reminder of the descriptions for each rating value.

RATING	RATING DEFINITION
0	Conflicts with existing state standards.
1	Presents a potential conflict.
2	Is a potential fit.
3	Fully meets the fit criteria

6. As each rating is entered, the Weighted Score for that criteria statement is calculated automatically, and the total score for that component is updated.

7. A comments column is provided for each criteria statement. This is a text field and the information entered will wrap. This information is optional.
8. Grouping is also provided to hide or show the category details. Two options are available:
 - a. Press the “1” to hide the detail of all of the categories. Press “2” to show all of the categories.
 - b. Press the “-” to hide the detail of a specific category. The “-” will change to a “+”. Press the “+” to show the detail.

Note: Comments (indicated by a red marking in the upper right corner of a cell) are provided throughout. The information in these comments will serve as quick reminders of the information contained or expected in the corresponding column.

Mandatory Reviews

The Mandatory Review sheets provide a means for evaluating the “must have” criteria statements that are contained in the fit matrices. If a component does not fully meet fit criteria on the matrices (Rating = 3), the component **should not be** classified as “Current”. Please review the following information to help determine classification:

- A score that is less than the "Must Have" Max Score will appear in red, and indicates that there is some portion of the Evaluation Fit Criteria that is not met. Based on this deficiency, the classification cannot be "Current". The classification determination will be based on the subject matter experts (SME's) understanding of the technology. The component can be classified as one of the following:
- **"Emerging"** - the technology is new to the State and been available for less than x period of time in the industry.
- **"Twilight"** - the technology is currently used in the State, but due to the low scores on the Architecture current evaluation criteria, which reflect deficiencies in areas considered essential to the State, is now scheduled to be replaced. The replacement technology must be known. If no replacement technology is known, the component must be classified as "Current" with a Technology Watch placed on it. (Additional detail on Technology Watch can be found in MAEA Part II – Chapter 1: Architecture Documentation Process.)
- **"Sunset"** - the same as Twilight except the date of final replacement from the State architecture has been identified.

Sheet Tips

These numbered items match the numbered circles on the sample.

1. Summary scores for components having less than perfect scores for all “Must Have” criteria statements appear in red.
2. The ability to Group/Un-group components for review is provided. For this example two component rows are showing (Component 1 and 2). Evaluators can use the grouping buttons at the top-left to hide or show the desired number of component rows. (To show 2 component rows, click on 2; to show all 7, click on 7; etc.)

	A	B	C	U	V	W
2	Mandatory Global Operational Review					
4	Component	Weight / Priority	Data	Grand Total		
5	Component 1		Sum of Weighted Score 1	180		
6	Component 2		Sum of Weighted Score 2	156		
12	"Must Have" Max Score		Sum of Max Score	180		

	A	B	C	D	E
2	Mandatory Global Operational Review				
3				Criteria	
4	Component	Weight / Priority	Data		
5	Component 1		Sum of Weighted Score 1	12	12
6	Component 2		Sum of Weighted Score 2	8	12
12	"Must Have" Max Score		Sum of Max Score	12	12

3. Grouping is also provided to hide or show the scoring details.

- Press "1" to hide the criteria detail.
- Press "2" to show the criteria detail. Showing the detail will allow the committees to see which criteria statement was not met.

If all the mandatory fit criteria statements **are** met, the classification process continues by analyzing the information on the Evaluation Totals sheet.

Evaluation Totals

The Evaluation Totals sheet provides a means for evaluating the overall scores of the components under review. On this sheet the scores are provided as percentages of the maximum Weight/Priority score for each category sub-total, as well as the overall percentage of the criteria met. The scores for two components are provided in the example below.

An overall percentile score that is less than **##%** (the exact percentage is to be determined by the architecture committees), indicates that there is some portion of the Evaluation Fit Criteria that is not fully met. Based on this deficiency, the classification cannot be "Current". The classification determination will be based on the subject matter experts (SME's) understanding of the technology. The component can be classified as one of the following:

- **"Emerging"** - the technology is new to the State and been available for less than x period of time in the industry.
- **"Twilight"** - the technology is currently used in the State, but due to the low scores on the Architecture current evaluation criteria, which reflect deficiencies in areas considered essential to the State, is now scheduled to be replaced. The replacement technology must be known. If no replacement technology is known, the component must be classified as "Current" with a Technology Watch placed on it. (Additional detail on Technology Watch can be found in MAEA Part II – Chapter 1: Architecture Documentation Process.)
- **"Sunset"** - the same as Twilight except the date of final replacement from the State architecture has been identified.

Sheet Tips

These numbered items match the numbered circles on the sample.

1. The Product / Compliance Component names (as entered on the Setup Page) are supplied in row 2. Where no component name was entered "N/A" appears.
2. The ability to Group/Un-group components for review is provided. For this example three component columns are showing (Test 1 and two N/As). Evaluators can use the grouping buttons at the top to hide or show the desired number of columns. (To show 3 component columns, click on 3; to show all 7, click on 7; etc.)

	A	B	J	K	L
1	Page1	(All)	Component 1	Component 2	N/A
2					
3	Sum of Value	Column			
4	Row	Weight / Priority	Weighted Score 1 %	Weighted Score 2 %	Weighted Score 3 %
5	Sub-Total: Application (Application Engineering, Electronic Collaboration)	54	100.00%	100.00%	0.00%
6	Sub-Total: Customer / Stakeholders	72	86.11%	86.11%	0.00%
7	Sub-Total: Information (Data Mgmt, Knowledge Mgmt, GIS)	75	86.67%	65.33%	0.00%
8	Sub-Total: Infrastructure (Network, Platform)	75	100.00%	84.00%	0.00%
9	Sub-Total: Integration (Middleware, Functional Integration)	87	79.31%	68.97%	0.00%
10	Sub-Total: Interface (Branding, Access, and Accessibility)	96	79.17%	79.17%	0.00%
11	Sub-Total: IT Architecture Requirements	0	0.00%	0.00%	0.00%
12	Sub-Total: Organization	54	57.41%	57.41%	0.00%
13	Sub-Total: Privacy (Profiling, Personalization, Privacy)	54	66.67%	66.67%	0.00%
14	Sub-Total: Product / Service	21	71.43%	71.43%	0.00%
15	Sub-Total: Security (Enterprise Security, Network Security, Host Security)	105	100.00%	100.00%	0.00%
16	Sub-Total: Vendor	30	90.00%	60.00%	0.00%
17	Sub-Total: Asset Management	72	94.44%	94.44%	0.00%
18	Sub-Total: Change Management	75	24.00%	24.00%	0.00%
19	Sub-Total: Console/Event Management	36	88.89%	88.89%	0.00%
20	Sub-Total: Help Desk / Problem Management	45	93.33%	86.67%	0.00%
21	Sub-Total: Business Continuity	72	94.44%	77.78%	0.00%
22	Sub-Total: Other Global Operational Requirements	0	0.00%	0.00%	0.00%
23	Grand Total	1023	3.11868546	12.10857052	0
24	Overall Percentile Scores		82.40%	76.44%	0.00%
25					

3. The maximum Weight/Priority score for each of the category sub-totals is provided. Note that the categories are listed in alphabetical order.
4. The Weighted Scores are shown as percentiles (the total weighted score per category, divided by the maximum for that category).
5. An overall total for each component is also shown as a percentile (the total weighted score, divided by the maximum).

The information provided on the Evaluation Totals, along with the information on the Mandatory Review pages for each matrix, will provide the objective scoring that will assist the committees in classifying each of the components. The classifications will be determined based on the matrix information provided and the input from the subject matter experts (SMEs).

Help Page

The Help page provides highlights of items found on the Setup Page, the matrix, mandatory review, and the Evaluation Totals pages. It is meant to be a quick reference, containing such information as the descriptions for the Ratings and Weights/Priorities, reminders of how to use the grouping features, etc.

Suggestions for additions to the Help Page should be forwarded to the Office of the Architecture Office for consideration.



Using the Fit Matrices – Sample Walk-Through

Accessing the EA Component Evaluation Workbook

1. Download a copy of the *EA Component Evaluation.xls*
2. Rename the file to the following naming standard (See naming standard in the next section):
3. Open the file, accessing the Setup Page (using tabs at the bottom of the Excel page)

Completing the Setup Page

4. Enter the date of the evaluation
5. Enter the names of the individuals participating in the evaluation
6. Enter the Blueprint Levels
 - a. Provide the Domain
 - b. Provide the Discipline
 - c. Provide the Technology Area (if applicable)
 - d. Provide the Product Component (if applicable)
7. Enter the component names to be reviewed.

Prepare to Evaluate the Component

8. Review the fit criteria statements on Common Business Fit
 - a. Note that criteria statements that are included in the scoring for this evaluation have a “+” in column A. (This is the default.)
 - b. Exclude statements that are not applicable for this evaluation by placing a “-” in column A.
9. Review fit criteria statements on Global Technical Fit
 - a. Note that criteria statements that are included in the scoring for this evaluation have a “+” in column A. (This is the default.)
 - b. Exclude statements that are not applicable for this evaluation by placing a “-” in column A.
10. Review fit criteria statements on Global Operational Fit
 - a. Note that criteria statements that are included in the scoring for this evaluation have a “+” in column A. (This is the default.)
 - b. Exclude statements that are not applicable for this evaluation by placing a “-” in column A.

Evaluate Component

11. Evaluate components based on Common Business Fit criteria statements
 - a. Enter a rating (0 –3) for each fit criteria included in this evaluation (“+” in column A)
12. Evaluate components based on Global Technical Fit criteria statements
 - a. Enter a rating (0 –3) for each fit criteria included in this evaluation (“+” in column A)
13. Evaluate components based on Global Operational Fit criteria statements
 - a. Enter a rating (0 –3) for each fit criteria included in this evaluation (“+” in column A)

Classify Component

14. Using the Mandatory Business sheet, review the grand total “Must have” weighted score for each component.
 - a. If the score is less than the Max Score for “Must have”, determine the classification
 - b. If classification is determined, the evaluation is complete for that component.
 - c. Continue the evaluation until all components have classifications.
15. Using the Mandatory Technical sheet, review the grand total “Must have” weighted score for each component.
 - a. If the score is less than the Max Score for “Must have”, determine the classification
 - b. If classification is determined, the evaluation is complete for that component.
 - c. Continue the evaluation until all components have classifications.

16. Using the Mandatory Operational sheet, review the grand total “Must have” weighted score for each component.
 - a. If the score is less than the Max Score for “Must have”, determine the classification
 - b. If classification is determined, the evaluation is complete for that component.
 - c. Continue the evaluation until all components have classifications.
17. If, after reviewing all of the Mandatory sheets, a product still has not been classified, review the Evaluation Totals.
 - a. Determine the classification based on the Overall Percentile Score

Document Component Classification

18. Once the Component Classification is determined, document the classification in the component Architecture Blueprint document by entering the component classification and the rationale for the classification.



Evaluation Workbook Naming Standards

EVAL_[owning architecture blueprint level][component level][document name][date]

Example: EVAL TA PC e-mail engines 6-25-02.doc

- **EVAL** – Denotes this is an evaluation workbook
- **Owning Architecture Blueprint Level** – the level of the Architecture Blueprint that the components being evaluated belong to:
- **DSP** – Discipline
- **TA** – Technology Area
- **PC** – Product Component
- **Component Level (Architecture Blueprint Level)** – the level of the components being evaluated. It is recommended to review products in one workbook at compliances in another.
- **PC** – Product Component
- **CC** – Compliance Component
- **Document Name** (Brief document title)
- **Date** (date document was last updated in *mm-dd-yy* format)



APPENDIX I – Additional Enterprise Architecture Resources

This appendix summarizes sources for additional useful resources that those interested in learning more about Enterprise Architecture can use to further explore the topic.

Books

Beveridge, Tony and Perks, Col. *Guide to Enterprise IT Architecture*. Springer Verlag, 2002. ISBN:0387951326

Charafas, Dimitris N. *Enterprise Architecture and New Generation Information Systems*. Saint Lucie Press, December 2001. ISBN:1574443178

Cook, Melissa A. *Building Enterprise Information Architecture: Reengineering Information Systems*. Prentice Hall, January 1996. ISBN:0134402561

Cummins, Fred A. *Enterprise Integration: An Architecture for Enterprise Application and Systems Integration*. John Wiley & Sons, February 2002. ISBN:0471400106

Spewak, Steven H. and Hill, Seven C. *Enterprise Architecture Planning: Developing a Blueprint for Data, Applications and Technology*. John Wiley & Sons, September 1993. ISBN:0471599859

Articles, Magazines and Journals

Pearson, David. *Enterprise Architecture: Fight or Flight*. CIO Magazine, September 1998.

Shargal, Meir and Intrator, Yoav. *No Enterprise is an Island*. E-Business Developer, January 2001

Mowbray, Dr. Thomas J. *What is Architecture?* i.t. The Complete Magazine on Information Technology, October 2000

Government Executive, a publication of National Journal Group, Inc.

Information Week, a publication of DMP Media LLC

Enterprise Architecture Internet Sites

<http://ewita.com/> - Enterprise-Wide Information Technology Architecture

<http://www.nascio.org/publications/index.cfm> - National Association of State Chief Information Officers. Includes links to the following:

- NASCIO Enterprise Architecture Development Tool-Kit v2.0
- 2002 NASCIO Compendium of Digital Government in the States
- Best Practices in the Use of Information Technology in State Government

<http://www.dama.org/> - Data Management Association International

<http://www.feapmo.gov/fea.htm> - Federal Enterprise Architecture Program Management Office, Federal Enterprise Architecture Framework

<http://www.whitehouse.gov/infocus/technology/> - The President's Technology Agenda Website

<http://www.ita.org/> - Information Technology Association of America

<http://www.isaca.org/cobit.htm> - Control Objectives for Information and Related Technology. Governance, Control and Audit for Information and Related Technology

<http://www.cots.state.va.us/ea/index.htm> - The Virginia Enterprise Architecture Initiative

<http://irm.state.nc.us/techarch/archfrm.htm> - North Carolina State-wide Technical Architecture

<http://www.zifa.com/> - The Zachman Institute for Framework Advancement

Standards Organizations

<http://csrc.nist.gov/> - National Institute of Standards & Technology (NIST) Computer Security Resource Center

<http://www.ieee.org> - Institute of Electrical and Electronics Engineers, Inc.

<http://www.w3.org/> - World Wide Web Consortium (W3C)

<http://www.iso.ch/iso/en/ISOOnline.frontpage> - International Organization for Standardization (ISO)

<http://www.sans.org> - SysAdmin, Audit, Network, Security (SANS)

<http://nsa2.www.conxion.com> - National Security Agency (NSA), Security Recommendation Guides